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DR. J. HUTCHINGS WHITE,
PRESIDENT OKLAHOMA STATE MEDICAL ASSOCIATION, 1915

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PRESIDENT'S ADDRESS, ANNUAL MEETING, BARTLESVILLE, MAY 11, 1915.

Fellow Members of the Oklahoma State Medical Association:

I wish to express my appreciation of the honor conferred upon me. I appreciate it all the more because of its having been spontaneously bestowed. I wish to assure you of my continued devotion to our Association in whatever position I may serve.

In these days of "isms" and "cults", one can but reflect as to the cause of their existence. When one enters upon the practice of medicine, he has assumed a serious and solemn obligation—an obligation that carries with it a demand for qualification and efficiency of the highest degree. It is true that there are men that do not realize the seriousness and solemnity of this obligation as they should, but this does not alter the premises.

Qualification and efficiency have been the standard of this organization in the past, and it will continue to be the duty of this society to carry this standard, not only on the illuminated hilltops of knowledge, but into the valleys of superstition, ignorance and greed. It is the mountain in the way of the unscrupulous, and instead of lowering this standard, we must insist now, as in the past, in raising it. Let everyone who seeks to treat the sick, first demonstrate that he is qualified to do so.

Credulity and ignorance are still widely prevalent throughout the world. There are thousands whose greed, and tens of thousands whose ignorance would impede the progress of the millions of this country. We send missionaries to convert the Turk, the Asiatic and the African, while we allow tens of thousands to die from preventable diseases. We have also been unmindful of the slaughter of others in factories and mines, by impure foods and drugs and the sale of patent nostrums.

Why are our legislators so interested in such cults as the Chiropractors and Christian Scientists? What have they ever done in the whole history of man to demonstrate that they are qualified to treat the sick? Why do they wish to lower the standard of qualification and efficiency and to legalize the treatment of carcinoma, diphtheria, spinal meningitis, appendicitis and the like by medieval supernaturalism which is one of the darkest pages in the history of civilization? Do they know that this supernaturalism held the sick and suffering of the European world in a deathlike grasp, retarding natural progress toward rationalism in medicine and well nigh extinguished the lamp of science, and enshrouded the inhabitants for more than a thousand years?

It is estimated that the average length of human life during the Dark Ages was less than twenty years. A high birthrate was necessary to keep the race alive. One has but to read history to see that disease and pestilence were the important factors in the decline and fall of Grecian and Roman civilization.

The Justinian epidemic of the Plague in the sixth century and the Black Death of the fourteenth century are examples of the devastating effects of disease. When the Black Death raged, England and Wales alone lost 2,500,000 people, or over one-half of their entire population, and 25,000,000 were carried off in Asia. In 1896 it started again in India, and in the past eighteen years it has carried off 8,000,000 people. Smallpox, typhus, St. Anthony's Fire, malaria and syphilis swept the land during this awful night. It was disease that all but wrecked the craft of civilization. These times were dark, physically, mentally and morally. Ignorance and disease held full sway; superstition was an irresistible attraction and dominated all conditions of men.

After reading this fearful indictment, how can any sane man wish to place on the statute books of our State a law authorizing any one who believes that there is no such thing as pain, hemorrhage, tuberculosis, or cancer, to treat professionally the sick, and that contagion and germs do not exist? Thus, in the extremity of delusion and for personal gain, would drag suffering humanity back to the Middle Ages, back to superstition, low and debasing.

I must remind the legislator that if the lamp of science had not been kept burning, that the civilization of today would not be, and that the same scourges that rocked the Middle Ages would be in existence today.

The elimination of free medicine was established a quarter of a century or more ago. The death rate is 25% lower than formerly, the average span of life is almost a decade longer, and diseases, formerly prevalent, are now curiosities.

The medical man has not profited by the legislation which the profession has urged along the line of medical control, nor is the medical profession opposing free medicine to restrict competition, or to get business. The medical profession does not stand alone as a unique example of whether the law should require special preparation for particularly important and difficult fields of labor. The study of the principles and codes of law is required before a man can practice law. Restrictions also apply to plumbers, insurance companies, and others, and it is no more an infringement on personal liberty to demand of a person, who holds views that are unusual and contrary to those of the majority, that he should be compelled to hear the other and much larger side of the question.

When Pasteur and his followers developed the science of bacteriology, then the mysteries of contagion and the transmission of diseases were made known. It marked the beginning in preventive medicine. Villeman recognized the contagiousness of tuberculosis and Koch discovered the tubercle bacilli as the cause of tuberculosis, and preventive medicine has slowly robbed the "Captain" of the men of death. Klebs and Loeffler recognized the bacilli of diphtheria and Von Behring and Roux gave the world antitoxin, which has lowered the death rate of diphtheria from eighty per cent to less than one per cent, and increased the average length of human life four years. Laveran discovered the plasmodium-malariae; Ross studied its life history and another of the great scourges of the world was eliminated. Finley suspected the mosquito and Reed proved that it was the cause of yellow fever. Gorges cleaned up Havana, which had been scourged with yellow fever for over one hundred and fifty years, and ac-

complished the greatest engineering feat of the world—the construction of the Panama Canal. By common consent the Isthmus was considered the unhealthiest place on earth, and had been considered, for over four hundred years, the white man's grave. It was a veritable pest hole. The death rate on the Isthmus in 1913 was 8.35 per mille, less than one-half of the mortality rate of many of our prominent cities.

One of our mistakes in medical organization today is that it is too great in extent—a paper organization—that is, “it consists of the names of officers and members of the societies that look very beautiful on paper,” but they have only developed to a small amount their effectiveness in a few instances.

Take the average county society, for instance: What does it do? Outside of a few places, it meets anywhere from once to four times a year, listens to a few stereotyped papers, read in a perfunctory way by members whom the secretary has induced to go on the program, elects its officers for the next year and adjourns.

Now what ought our County Society to be? They ought to be the center of medical and sanitary influences for the county; it ought to be recognized as an authoritative body in each county, so that the public, the newspapers and the county officials could turn for authoritative and reliable information on any subject connected with the physical well being of the community; they should include every reputable and legally qualified physician in the county and the dues should be an amount that would enable a County Society to offer such advantages for membership that no man could afford to stay out of the organization. Personally I do not believe, in the least, in putting dues down under the mistaken impression that low dues will attract members, and this brings us up to what really is the most important question in organization, viz: that of finances.

Up to 1899 the American Medical Association never had money enough to do anything except to pay its own running expenses, and that on a very modest scale. In other words, the Association was a machine which used up all of its power in turning its own wheels; but today it has a net income over all expenses of \$60,000 a year and can afford to appropriate \$30,000 a year for public education alone.

Our State Societies today are in much the same condition as the American Medical Association was before 1899. Many of them are barely paying expenses and most of them are not trying to do anything else. Their per capita assessment in each case is the smallest possible amount that will pay absolute necessary expenses. The result is that most of them do nothing because they cannot afford to do so and, instead of each State Association being a miniature American Medical Association in its own field, many of them have little, or no influence, with the public in their own state. Then the finances of the State Societies are next in importance to a medical organization. If our state organization has money to spend it can do things; if it has not, it cannot. The more it does for its members and the public, the more support it will have, consequently the stronger it will be financially, so that the thing works in a circle.

I would advise that the society consider seriously the advisability of securing a permanent, centrally located home. The possession of a home for an organization has the same effect as it does on an individual. It gives it stability, permanence and increased local influence. It also gives our organization a definite program to develop and something tangible to show for its efforts. It is of the utmost importance for our future development and professional influences to put the affairs of our State Association on the highest possible plane of financial and administrative efficiency. It

then can collect information on medical subjects and social subjects allied to medicine that will be of service to the profession and the public and, at very little cost to the association, it therefore would become an effective and productive machine, filling a definite place in the state social system and performing definite functions to the profession, the public and the State.

Much has been said about the hookworm in the South and its effect on the public health. Our former State Health Commissioner, Dr. J. C. Mahr, laid the foundation for future investigation of hookworm in this State. He succeeded in interesting the Rockefeller Sanitary Commission in the hookworm problem in our State. Many of you remember the exhibit given by Dr. Adams at our last State Association meeting. At that time he did not make a report, but later on he reported to the State Board of Health that the hookworm was in Oklahoma, especially in the southeastern part of the State. Previous to that report, few had considered Oklahoma as belonging to the hookworm belt. In the counties made from the old Choctaw nation, Adams found the largest per cent of infection. This could be accounted for by the fact that the Choctaw Indians were brought from a well known hookworm section and settled by the United States Government on this reservation, which is below freezing line. They probably brought the infection with them.

The pupils in the Indian School at Boswell, in Choctaw county, showed the highest per cent of infection, 78%, although the average per cent found throughout these counties was 8% plus. This, together with the further reason that the Sanitary Commission was being reorganized, was the cause for this work not being carried on more extensively.

A report of interest to the State Association is one that was made by several members of this Association in 1912, in regards to our State institutions. In this report it appears that the State has made little or no preparation for the care of the sick. I am of the firm belief that if it is right for the State to incarcerate a man or woman in its institutions, then it should be obliged to protect that individual's health and be able to render him what is recognized as scientific treatment, when disease threatens his life. For a man is a man, whether erring or unerring, and health is just as valuable to one as to the other, and society must recognize both.

In 1911, there was epidemic of typhoid in one of the State institutions. This started, as many other diseases in institutions, from an inmate who was ill from typhoid when he was admitted, and, the institution not being prepared to care for him properly, the disease spread to other inmates. What a State institution can do and what a competent medical man can and is doing is superbly shown in the Institution for Feeble Minded at Enid. In 1912 there were 53 inmates, no fire-proof buildings, and lots of hard work ahead of the man that made good. Today they have two new fire-proof buildings, 215 inmates, first hospital in State institution in the State and one of the best hospitals in the State. This institution has been recognized by the State of New York as second only to the institution at Vineland, N. J. It is quoted extensively by New York State in its publications. Numerous requests are received from neighboring states to place children (pay cases) in this institution. Dr. Kendall was the man pre-eminently fitted to be at the head of this institution.

If this can be done with human misfits, then an institution where normal children only are received should make a better showing. The Orphanage at Pryor Creek could well apply there the sound principle of preventive medicine. Because a child, with lice or measles or some contagious disease, is admitted to an institution, is no reason why it should spread to all inmates.

Preventive medicine found its scientific foundation in Pasteur's demonstration of disease—and the cause of infection. It finds its verification in vital statistics, its financial justification in the value of the human being, and its moral justification in the welfare of the race and community happiness.

In reply to an inquiry of mine, addressed to Dr. Gayfree Ellison, I received the following letter, which is self-explanatory: "In reply to your letter inquiring about our laboratory work, and the condition in which samples are received, would state that after several years of teaching, we have succeeded in getting about 75% of the specimens of sputum sent in good condition, with data cards and information accompanying. Since we furnished the mailing tubes, bottles and cards, there has been a decided improvement in the shipping of this class of material.

"Dog heads are still sent in any haphazard manner. It is the exception, rather than the rule, to receive data or information in regard to the condition of the dog before being killed, and but a small per cent of the heads are properly packed. Many of them are decomposed and unfit for examination. Much education in the line of collecting specimens for rabies is needed. It should be impressed upon physicians, and the laity as well, that those dogs suspected of being rabid should not be killed, but kept for observation. Then, again, a physician should understand that a negative report for rabies is of no value. This does not seem to be generally understood.

"Most specimens for diphtheria are in poor condition when received. These examinations are difficult problems to handle. Culture tubes cannot be kept indefinitely in the physician's office. They seldom renew their supply, and when the tube is needed it is usually spoiled. The result is that the physician usually sends in large wads of cotton that represent swabs. It appears that a majority of the doctors do not know how to make a swab for the throat. These large wads of cotton are so bulky that they cannot be introduced into a culture tube. Most of the swabs received are too dry to attempt to make cultures from them when they reach the laboratory. The few spinal fluids received this year have been in very poor condition. In very few instances was the bottle in which the fluid was collected sterilized, and the secondary contamination obscured the diagnosis. With but few exceptions, we never received any smears from malaria that could be examined. Blood on paper, cloth, glass, etc., is frequently sent in with the request for diagnosis for malaria.

"Specimens for Widal are, as a rule, received in good condition, as we furnish data cards and aluminum foil to receive the blood, and these have been quite extensively distributed over the State.

"Examination of feces for hookworm and parasites are seldom asked for. We had only twenty-five specimens in 1913, and thirty-nine in 1914, with but very few positives.

"The examination of tissues for malignancy is not included in the public health examinations and therefore we receive but few. The few we have received are seldom in good condition, many of them being dried on gauze or paper.

"While the laboratory serves a large number of the physicians, there is still a majority that never send specimens of any kind. There has been less complaint this year in regard to examinations and delay than at any other time. There is still some reluctance with many of the physicians to furnish data with the specimens. Many of them seem to believe that if data is furnished the result of the examination may be affected. If these examinations are to be of any value to the State as records and statistics,

accurate data should be furnished and filed with each case. The laboratory worker should be considered as a consultant in each case, and is entitled to adequate data in order to assist in the diagnosis."

Tuberculosis continues to claim too high a death rate. If the mortality is to be reduced, it must be recognized in the early stages. Familiarity with the early signs and more positiveness in regards to rest will surely give the tubercular patient "a white man's square deal." It is evident that a state institution for the care, treatment and education of tubercular patients must first be built before the mortality of this disease can be decreased much more. When tubercle bacilla are found in the sputum the disease is no longer in an early stage, for this in itself is evidence of a cavity formation.

A report of the sputum examination at the Public Health Laboratory, Norman, Oklahoma, shows the following:

Age -----	10 to 19				20 to 29				30 to 39				40 to 49				Over 50			
Sex -----	M		F		M		F		M		F		M		F		M		F	
1913	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive
	26	6	32	9	60	21	47	34	35	23	51	21	29	9	23	8	32	9	19	0
Total -----	32		41		81		81		58		72		38		31		41		19	
Percent Positive -----	18		21.9		25.9		42		40		29.9		24		25.8		22			
1914	21	2	29	6	41	11	46	14	25	16	30	12	29	5	13	4	17	10	14	1
Total -----	23		35		52		60		41		42		34		17		27		15	
Percent Positive -----	8.7		17.1		21.1		23.3		39		28		14.7		23.5		37		6.6	

It is evident from this laboratory report that the early signs of pulmonary tuberculosis have been overlooked, consequently the most opportune time for curing the patient has been neglected. Knopf says that one out of every six persons sentenced to the penal institutions die from tuberculosis. They either die in the institutions, or go out and carry it home and spread it to numerous other individuals. The same is true of the patients in the insane asylums. These facts should make us think. It shows the necessity of having an infirmary or hospital in connection with our State institutions. Our State Asylum at Norman, since the construction of the infirmary, has enabled the staff to cure and send home more cases than ever before in the history of the institution.

If tuberculosis is as common as we know it to be, why has the State been so slow in recognizing the importance of isolating and properly treating these cases? The percentage of tubercular patients in a penitentiary is as great as outside of it, and we know that confinement must render the inmate more susceptible to the tubercular invasion. I believe that the death rate from tuberculosis in Oklahoma is rapidly increasing and will continue to do so until some provision is made for the ambulatory poor tubercular patient. They wander around, throwing off millions of tubercle bacilli daily, until they can no longer move about. In an Oklahoma City hospital, the tubercular patients live only two or three weeks after being placed in the institution.

Cancer is also on the increase, especially of the cervix and breast, and it continues to pass undiagnosed in far too many instances. The American Association for the Prevention of Cancer is actively engaged in educating

the public in regards to the treatment of cancer and tumors. It points out the importance of treatment at an early date. The cancer fakir still has his harvest. It was only a few weeks ago that I saw a patient who had been treated with a cancer paste by a so-called cancer specialist. The woman realizes her mistake and now must pay the debt caused by her own ignorance and the ignorance and avariciousness of another.

I wish to call your attention to the records of the State Board of Health for the last four years, from 1910 to 1914, in regards to the deaths from typhoid fever, tuberculosis, pellagra and cancer.

OCTOBER 1, 1910, to SEPTEMBER 30, 1911.

Typhoid fever	557
Tuberculosis	740
Pellagra	24
Hookworm	2
Cancer	<div style="display: flex; align-items: center;"> <div style="font-size: 4em; margin-right: 10px;">{</div> <div> Buccal Cavity 22 Stomach and Liver 65 Peritoneum, intestines, rectum..... 21 Female Genital organs..... 31 Breast 13 Skin 11 Organs not specified..... 31 Other tumors (Tumors of the female genital organs excepted) 31 </div> </div>
Total, Cancer	235

OCTOBER 1, 1912, to SEPTEMBER 30, 1913.

Typhoid fever	399
Tuberculosis	720
Pellagra	72
Hookworm	0
Cancer	<div style="display: flex; align-items: center;"> <div style="font-size: 4em; margin-right: 10px;">{</div> <div> Buccal Cavity 2 Stomach and Liver 48 Peritoneum, intestines, rectum..... 10 Female Genital organs..... 26 Breast 68 Skin 6 Other organs, not specified 101 Other tumors (Tumors of the female genital organs excepted) 3 </div> </div>
Total, Cancer	264

OCTOBER 1, 1913, to SEPTEMBER 30, 1914.

Typhoid	353
Tuberculosis	730
Pellagra	149
Hookworm	0
Cancer and other malignant tumors	<div style="display: flex; align-items: center;"> <div style="font-size: 4em; margin-right: 10px;">{</div> <div> Stomach 109 Buccal Cavity 9 Peritoneum, intestines, and rectum..... 35 Female genital organs..... 46 Breast 16 Skin 18 Organs, not specified 63 </div> </div>
Total, Cancer	196

The Standardization of Hospitals.

The commendable work which has been started by the A. M. A. to improve our hospital efficiency must not be passed over by this association. The plans proposed, if adopted by hospitals of this State, will not only improve the standards of the hospital but also the standards of the medical profession in their communities.

Committees have been appointed in each state and were instructed to obtain accurate information regarding all the hospitals in their respective states. The hospitals are then graded on a civil service basis under the following ten heads, allowing 100 points for each head.

1. Buildings and grounds; light; heat; ventilation; repairs; cleanliness.
2. General supervision; superintendence, etc.
3. Trustees; ownership and general conduct; whether conducted in the interests of the community and scientific medicine, or solely for the profit of the attending staff.
4. Medical staff; its organization, character, etc.
5. Intern service; existence of; proportion of to patients.
6. Nursing; training school for nurses; orderlies, etc.
7. Laboratory; Roentgen ray facilities, etc.
8. Records; histories; library, etc.
9. Out-patient department; emergency service; autopsies, etc.
10. Educational functions; teaching; research; influence on local profession, etc.

In 1913 there were 924 hospitals in the U. S. having 100 or more beds; 1500 having 25 to 100 beds; representing altogether 193,056 beds. This association can no longer look with complacency upon the hospitals which are antemortem resting-places. The hospital of the future must know definitely whether the patient is alive at the end of one, three or five years; whether the operation or treatment has made the patient better or worse. This will gradually eliminate the so-called needless surgery or treatment, and at the same time must elevate the standards of the medical profession. The hospital of the future must mean more than it has in the past. It must assume the dignity of a diagnostic institution in its respective community. Is it not as proper to ask those desiring to run a hospital to show some qualifications as it is to ask for qualifications and efficiency to practice medicine? You cannot separate the two. If one be inefficient, the other must also be.

I wish to call the attention of the society to a law which requires every practicing physician in the State to have his State license so arranged that it can be seen at any time. You will have no standing in court if a patient takes this subterfuge to avoid paying a bill.

Medical defenses have been taken up and is in operation in California, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Vermont, West Virginia, Wisconsin, Texas and Arizona. Not a single state has abandoned the plan after it has once started it. The plan is simply a pooling of interest on the part of all the members for the employment of a common attorney. This is all there is to it, and the reason why such a plan is effective is only understood when one grasps the situation. In the first place, the law of professional responsibility and liability is not a matter of statutory law at all. It is a matter of common law and, consequently, in this country rests not on a legislative enactment but on court decision.

It is what the lawyers call "case law" and not statutory law. There is no state, so far as I know, that has ever passed a special statutory regulation limiting or defining professional responsibility. There are, however, any number of court decisions, probably ten or twelve hundred all told, bearing on this subject. This means that the lawyer, in order to be an expert, has to be familiar with all these decisions and this involves an enor-

mous amount of work in reading, abstracting, classifying and analyzing all of this material. Now the ordinary lawyer does not get more than one malpractice case during his professional lifetime, and he cannot afford to give more than a limited amount of time to study of this case. Consequently, most lawyers know nothing whatever about the law on this subject.

When a physician is threatened with a malpractice suit, if he is alone and without any protection, he generally becomes panic-stricken. He is afraid, not only of financial loss through damages, but still more of the loss to his professional reputation. He never had any experience with the law before, and he is scared to death. Now, the lawyer who, heretofore, has made a specialty of this line of business knows this, and he waits for two or three weeks for the scare to soak in, and then he goes around to the doctor and suggests that perhaps the matter might be settled out of court by the payment of a certain amount of money. The doctor generally snaps at the proposition, and the lawyer gets as much as he can out of him, of which he generally pays his client twenty-five or fifty per cent and pockets the balance as a contingent fee. This is no fancy picture. It has been done time and time again, and the great majority of damage suits are brought without any intention of bringing them out in court, but simply with the intention of "shaking down the doctor." It only costs a few dollars in any state to file a suit, and you can scare a man just as well by simply filing a suit as you can by going on with the filing of the stipulation or the hearing in court.

If the doctor, under such circumstances, goes to his friend, the lawyer, or to some legal adviser, he is not much better off. The lawyer does not know much more about the matter than the doctor, and he usually advises the doctor to settle for a reasonable amount if he can, because he knows it will cost him more to fight it. From the standpoint of the average lawyer, this is good advice, but it is not to the interest of the individual doctor or for the profession as a whole. Disgruntled patients and shyster lawyers ought to be taught that in any case that is filed against a member of a state association is going to be fought to the finish and carried to the last court, and they are not going to get a cent out of it unless they prove their case. This is the best way to discourage unjustifiable damage suits.

What is the plan of medical defense? Practically this, that the state society assess each member a nominal amount, generally \$1.00 or \$1.50 a year, and with the fund thus secured, it retains the best lawyer obtainable on a yearly retainer and assures him that he will have all of the malpractice business that may arise in the state. Now what does this mean? It means that the lawyer, either himself or through an assistant, is justified in making a careful study of the subject, at least as far as the court decisions in his own state are concerned, and in becoming thoroughly familiar with the law on this subject. The result is that when a case comes into his hands, he is really able to give expert advice, and he very soon becomes an expert on the subject. This means that each member of the state society has a better legal service for \$1.50 a year, collectively, than he could have for two or three hundred dollars, individually, because it enables one man in the state to specialize on that subject and to be the attorney for the entire state membership.

I should think that \$800 or \$1000 would probably be sufficient to secure the best lawyer in the State. Of course, we will have to provide that, in case of an actual suit going to court, that the attorney is to be paid by the defendant, either at the regular rate or at some agreed rate, and that the state society is not to pay this at least for a few years until we have accumulated a surplus. With twelve hundred members at \$1.50 each, this will give your committee a fund of \$1800 a year. If we pay \$800 of it for

an attorney's fee, this will leave us a margin of \$800 or \$1000. Probably we will have \$200 or \$300 expenses each year for incidental expenses for the chairman of the committee, such as traveling expenses, stenographer, etc., but we ought to be able to put \$400 or \$500 a year into a reserve fund. As this accumulates, we can arrange to assume court costs and other expenses, which is far as any state society has gone.

In this medical defense the state society is not defending anybody. It is simply giving the defendant the benefit of an attorney who is an expert on this question, and, if each member pays his assessment, he is entitled to such services, no matter how flagrant the malpractice may be. Whether I am careless or ignorant in treating a case, does not alter the fact that I am entitled to the best legal services and advice that I can get, and that is all that the plan does.

Now let us see how the plan works. Suppose such a method is adopted and you are served some day with a notice that a suit for damages has been filed against you. You immediately notify the chairman of the committee on medical defense, sending him copies or originals of all papers served on you, which he immediately turns over to the attorney. Instead of having a man who is entirely new or inexperienced in this line of work, you have the services and the advice of the one lawyer in the state who is handling all of that business, and who, if he is the right kind of man, has, by this time, abstracted and indexed in his office all the court decisions on professional liabilities which our courts have handed down from the beginning, as well as all the important cases in other states.

He will be able to tell you and the chairman of the committee in half an hour what the best plan is and what the chances of successful defense are. You will not feel any uneasiness about the case, because you will know at once that you are getting advice that is thoroughly competent and, at the same time, that comes from a man who has your interests at heart. You don't need to worry about being held up for exorbitant fees, because, as a member of your state society, you are entitled to the services and advice of the lawyer up to the time of appearing in court, and, if the case goes to court, the lawyer has agreed to appear for a certain definite amount. This does not prevent you from retaining your own personal lawyer in the case if you wish. But if you are wise, you will have the state association attorney in the case, at least as counsel, on account of his experience.

The attorney will probably advise you on the start simply to sit tight and say nothing. When the lawyer for the plaintiff comes around in the course of a few weeks expecting to find you scared stiff and ready to settle for a cash payment, you can simply refer him to the attorney for the state medical association whom he will recognize as being one of the biggest lawyers in the state. He will not appear as the attorney for the state association, but will appear as your personal legal representative, and when the lawyer, who has instigated the damage suit, and who has taken it on a contingent fee, in the hope of holding you up for a few hundred dollars, finds that he has a fight on with the biggest lawyer in the state, he becomes frightened, because instead of his fee being a sure thing, it has become a question of court decision, and in order to get a chance even at that, he will have to put up court costs and court expenses. The result is that only those cases in which there is a real basis for suit, or in which the plaintiff feels that he has a just grievance, go to trial, and even most of these cases, if there is any justification for it, can be settled out of court. But the difference is that they are settled by your lawyer, instead of the other man's lawyer, and the chairman of the state committee is a member of all the conferences and gives you his advice and support.

If the case does not go to trial, instead of standing alone, you have the backing of the entire state society, and the chairman can secure other men as expert witnesses to an extent that you, individually, probably could not do. There is another funny thing, and that is that without anything having been said about it, it is impossible to get any member of the state association to appear as expert witness for the plaintiff in a case that is being defended by the state society.

The importance of a Supreme Court decision on what is the practice of medicine can not be overestimated. A good, live county attorney could make a test case of some of these cults that are practicing medicine without any qualifications, and the necessary money to defray the expenses of such an action could be taken from the society's treasury.

It is immaterial whether we win or lose in the lower courts. The object to be attained is to get the case before the Supreme Court of the State and get a decision on what constitutes the practice of medicine. Many believe that our present law on this subject is inadequate.

It has been generally admitted that the division of fees is being practiced in all parts of the State and, in order to eliminate this evil, it has been suggested that it must come through the staffs and governing boards of the hospitals of the State.

In order to start this reform it has been suggested that the larger hospitals of the State begin this propaganda by requiring their staff members to take an obligation similar to that required by the American College of Surgeons and publish the name of each hospital in the State Journal and the lay press. In this manner, it is believed, we can quickly and firmly destroy this practice in Oklahoma. Publicity is the one thing that will destroy any evil.

CHAIRMAN'S ADDRESS, SECTION ON SURGERY.*

By Ralph Smith, M. D., Chairman, Tulsa, Okla.

In recent years it has been thought the right of the specialist to call the attention, not only of the profession, but of the non-medical public as well, to the wonderful advancement made in his particular practice. While this applies to surgery in particular, yet the time is come when the specialist must make a careful study of the present day conditions, for with this advancement has come evils that must needs receive our earnest consideration.

Modern surgery teaches us that the surgeon must not place his whole reliance in the knife, but must utilize every known means to combat disease. He must strive to avert the injurious influence of the operation upon the protective and vital forces of nature. The golden rule of the surgeon should be: "Not how much cutting can I do and my patient still live, but how little can I do and benefit my patient." T. B. joints are being operated less and less; ulcer of the stomach, the Bucephalus, that has carried some well known surgeons to fame, is being subdued by the internist in no small percentage of cases; John D. still lives, and his millions have not been mutilated by the extraction of a two hundred thousand dollar fee. Goiter is today being studied more from a standpoint of etiology, and soon may be recognized as one of the symptoms of a deeper pathological condition—all of which teaches us that complex disease processes cannot be cured by operative measures alone.

No one questions that during the past generation surgery has advanced more rapidly than any other branch of the healing art, yet the signs of the times are imminent and it is confidently predicted that within the next

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generation the study of internal medicine will be reduced to such a scientific basis that we shall see a reversal of the relative positions of surgery and internal medicine. Where surgery now removes large portions of the body to cure disease, the internist of the future will accomplish the same by the scientific use of serums and vaccine therapy.

It is evident that a large proportion of the general practitioners, and no small number of surgeons, prefer not to discuss the business side of the practice of medicine and surgery, because the spirit of commercialism has arisen to such an extent as to overshadow the moral and ethical phase of the subject. No man of good moral fibre will defend fee-splitting as ordinarily practiced. Division of fees is wrong and debasing, and places both parties in an unfavorable light among his fellows and the non-medical public. The evil is the legitimate offspring of covetous, unsuccessful surgeons, who practice it with the hope of increasing their patronage and income, nurtured and fostered by the general practitioner, and accepted, not as their due, but as "easy money."

We should arrive at a proper solution of this problem that the integrity of the profession may be preserved. The remedy lies not in seeking legislation against the evil, though be it to our shame such has been attempted from time to time in the various state legislatures. No question can be definitely and correctly settled unless it be on the basis of equity and justice to all parties concerned. One thing needful tending to the solution of the problem is the training of the student in ethics in general, and the practicing of the same by the entire profession—not the narrow, antiquated code that is usually thought to guide medical men, but the higher and broader conception of ethics that should guide men in the whole professional and business world as well.

But the thing most necessary is the education of the non-medical public to the end that it shall appreciate at its fair value the service the general practitioner renders in making the diagnosis and referring the patient to one specially trained to care for that particular case.

There is a disposition on the part of many to laud the position of the specialist to the end that he occupies a higher plane than does the general medicine man. This idea should and must be discouraged, inasmuch as there is no higher position possible than that held by the family doctor; nor should anyone be held in higher esteem. Again in no specialty is the need of such a fund of general information as is required to be displayed by the family doctor, who must be looked upon as a specialist in every department of the practice of medicine.

CHAIRMAN'S ADDRESS, SECTION ON MEDICINE AND MENTAL AND NERVOUS DISEASES.*

By Chas. W. Fisk, M. D., Kingfisher, Okla.

From the very beginning of laboratory experimentation with the anti-toxins it has been observed that frequently animals have suddenly died on receiving a second dose of serum. This was regarded as purely accidental, or as being due to some lack of vital resistance peculiar to the individual. When Ehrlich was visiting in this country in 1904, Theobald Smith directed his attention to the peculiar susceptibility of used animals and expressed the opinion that there was a hypersensitiveness induced by the initial dose which caused the animals to succumb to the repetition of the dose. Following this suggestion investigations were made in Ehrlich's laboratory, and

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by competent men in other places. This research was conducted with great care, because it was believed that some light might be shed upon the cause of the sudden deaths from the use of diphtheria antitoxin, which had been reported from time to time.

These investigations have furnished much valuable information concerning the peculiar reaction to the introduction of proteids into the circulation, which is known as anaphylaxis. While much has been learned which is of great importance, much more remains to be learned—in fact, we are now working out the rudiments or elementary principles of a problem which promises in time to solve the whole mystery of infection and immunity.

If a laboratory animal receives into the circulation a dose of horse serum or some other proteid, no bad effect follows and a like dose may be administered repeatedly at short intervals with safety. But, if even a minute quantity of the proteid is injected and, after the lapse of ten or twelve days it is followed by another dose, there will probably quickly follow a violent reaction which will usually be fatal. It is not the amount of the serum given which causes this untoward result, nor does it depend upon the antitoxin contained in the serum. The animal has been sensitized by the first dose and will offer a poor resistance to its repetition. This hypersusceptibility is not present until after the lapse of a definite time, usually from eight to twelve days. The tenth day is regarded as the real danger point.

The reaction is specific. If an animal has been sensitized to horse serum, then horse serum alone will produce the anaphylactic reaction. The same specific hypersensitiveness may follow the injection of milk, egg albumen or some other proteid. An animal may be sensitized to three or more proteids either by having them administered at intervals or all at one dose, and will react to each in turn if it is able to survive the successive shocks. This increased susceptibility may continue during the whole life. A female which is sensitized will transmit the susceptibility to the progeny and they will react dangerously to the homologous serum or proteid.

In the more recent works on practice, serum sickness is mentioned as occurring after an interval of from one to eighteen days, with oedema, urticaria, more or less general malaise, vomiting, fever, adenitis, albuminuria and arthralgia. These symptoms are usually not severe and disappear in three or four days. Osler mentions the more serious reaction. He says: "There is another reaction which is more serious—anaphylaxis. This comes on quickly with acute symptoms, among which are extreme distress, dyspnoea, cyanosis, oedema, collapse, respiratory failure and convulsions; death may follow rapidly." There seems to be a lack of uniformity in the definition of anaphylaxis. Some appear to group all the symptoms of serum sickness under the one comprehensive term. Others would include drug idiosyncrasy and other reactions of a similar nature. I have seen a few cases of reaction from the bite of a spider which resembled the real anaphylactic shock in the lightninglike rapidity of the onset of the symptoms and their extreme violence.

D. G. Smith, of Washington, reports a case as follows: Time between the ingestion and the crest of the anaphylactic symptoms nine days; eruption four days; oedema, coming on after the subsidence of the eruption, lasting six days; joint infection with fever, pain, swelling, prostration and delirium, lasting a week, and making a total of twenty-seven days after the injection of the serum.

F. Bonheim reports a case in which there is considerable of itching at the spot where the injection is made, which, by the end of the week, developed into an intolerable pruritis over the whole body. There was urti-

caria, small pulse, sub-normal temperature and at one time brief syncope with an attack of weakness. The symptoms improved in four days until there was nothing left but a weakness of the leg muscles. One case is reported of general adenitis, following the decline of the anaphylaxis, with death in four weeks from acute lymphatic leukaemia.

The urticarial and other of the lesser manifestations of reaction to the serums are an every-day experience. I had a patient develop a very severe disturbance on the fourth or fifth day when repeated doses of antitoxin had been given in the treatment of acute tetanus. There was an unbearable pruritus and a condition closely resembling erysipelas. In this case the sulphate of magnesia was given hypodermically, not for the tetanus but to relieve the pruritus. This symptom was of short duration and left no unpleasant sequelae. These reactions, which appear after several days have elapsed, differ very materially from the real anaphylaxis, which is characterized by its lightning-like rapidity and the overwhelming violence of the symptoms. I witnessed a case in which the prophylactic dose of tetanus antitoxin was given to a boy who had stepped upon a nail. In ten minutes there was a feeling of prostration with nausea. Ten or fifteen minutes later there was collapse with imperceptible pulse, very irregular heart action, asthmatic symptoms and the general appearance of impending death. After a stormy period lasting two or three hours the alarming symptoms subsided, leaving some oedema and considerable of prostration for a few days.

It is worth while to remember that such an alarming condition may follow the use of the antitoxins and that it is not uncommon for such an anaphylactic shock to terminate fatally.

Certain individuals are sensitized to horse serum, although they have never received a dose which would sensitize them. How this has been accomplished is as mysterious as the fact of its accomplishment. Such persons may be unpleasantly affected by being in proximity to horses, particularly if the animals are perspiring. They develop an urticaria, or asthmatic, or hay fever symptoms. Such persons will react dangerously to the injection of horse serum. It is stated that if this sensitiveness to horses produces only nasal or hay fever symptoms, the danger is less or not to be feared, and that it is not present in other forms of asthma, or vasomotor rhinitis.

T. B. Talbot, of Boston, thinks that asthma is a manifestation of anaphylaxis. The urticaria, which is seen upon the skin, appears upon the mucous membrane of the bronchi and obstructs the passage of the air. It is a common experience to find that attacks of asthma are due to some idiosyncrasy. Some children have an asthma which is due to egg poisoning. This is demonstrated by inoculating with egg-white, to which they will show a reaction. They may be immunized to this specific poison by feeding gradually increasing doses of albumen in capsules. This will relieve the asthma unless the recipient is sensitized to some other proteid.

Horse asthma may be recognized by the vaccination test with horse serum. Dr. J. L. Goodale thinks that a preliminary skin test should be made with horse serum in all persons who have previously received an injection of any antitoxin derived from the horse. He says: "In all persons who are about to receive the first dose of antitoxin, inquiry should be made as to whether they have been disturbed by asthmatic symptoms when in the neighborhood of horses. If so, they should first be tested." This is not in accordance with the instructions given by some of the manufacturers of serums. They say dangerous anaphylaxis is so rare that it can be disregarded in practice. Dr. Woody, in the Journal of the A. M. A., says

in his experience this occurrence is of so great rarity that it cannot be allowed to influence us in the least.

It may be safe to go it blind, if advice of this sort is uniformly given by the acknowledged leaders in our profession, but so soon as the word of caution is spoken our duty to our patients demands that we use reasonable care to forestall accidents. The mere fact that such a reaction is unusual does not in the least mitigate the danger when it does occur. It will seem far too common when we witness a sudden death from the administering of a dose of antitoxin. It will add very materially to the distress of the physician if he is conscious that this unfortunate accident could have been prevented and that he himself is guilty of gross neglect.

In this connection it may not be out of place to refer to the medico-legal status of this question. The physician would not be considered responsible for the death of his patient as a result of administering a dose of antitoxin if he has used reasonable care to avoid such accident. The interpretation of this term "reasonable care" would vary from time to time and it might so happen that what would be considered reasonable care today would be considered gross neglect tomorrow. The very fact that the late text-books recommend caution in the use of the serums, places an obligation upon us that we cannot safely disregard. The neglect of such care would be regarded as culpable. This is more especially worth considering since the U. S. Public Health Service has issued a warning in a booklet entitled "Diphtheria, Its Prevention and Control," and have sent this booklet to the physicians throughout the land. We cannot afford to close our ears to these words of warning lest sooner or later we may be confronted by a tragedy which might easily have been avoided.

It is possible for man to be sensitized to the various vaccines and bacterins which are in such common use. A minute dose of one of these proteids might so sensitize the patient as to make a succeeding dose react dangerously or even fatally. The last word has not yet been said on bacterin therapy either as regards its benefits or its ultimate dangers.

In view of the possibility of creating a hypersensitiveness, some physicians refuse to administer the prophylactic dose of diphtheria antitoxin to those who have been dangerously exposed to infection. They choose to incur a present grave danger rather than hazard the more remote risk.

This would seem to be an unwarranted excess of caution, for the following reasons: The one who receives the prophylactic dose would not necessarily be sensitized to its later administration. There is probably a time limit after which such hypersensitiveness, if incurred, will disappear. Children are generally the ones who need the protection, and they are much less likely to be sensitized than adults. The vaccination test affords a ready means of determining if there is probability of a dangerous reaction. The preliminary subcutaneous injection of a small amount of antitoxin will afford protection from anaphylaxis.

It is concluded by those who have made systematic observations in this field that ninety per cent of adults and fifty to sixty per cent of children are naturally insusceptible to diphtheria infection. These conclusions are based on the Schick test, which depends upon the local reaction to the intracutaneous injection of small amounts of diphtheria toxin. If this test proves to be reliable it should be used as a routine measure before giving the prophylactic dose of the antitoxin. Those who are not susceptible to infection do not need the prophylactic dose.

Osler gives instructions as follows: "If there is any reason to suspect the possibility of a reaction, the patient should be tested by the administration of two or three drops of antitoxin, which will not give a

dangerous reaction. If susceptible the reaction will occur in one hour, but it is usually safer to wait three hours. If the patient is sensitive and the need of giving the antitoxin is urgent, small doses should be given at short intervals. In the absence of reaction it is safe to give the usual dose, for a sensitized individual, after receiving a small dose, is refractory to the large dose some hours later."

CHAIRMAN'S ADDRESS, SECTION ON PEDIATRICS.*

By M. A. Warhurst, M. D., Sylvian, Okla.

Infancy and childhood in many respects are the most important and interesting periods of life. To the physiologist they are of special import, as this period of life has the greatest development and greatest activity. The pathologist should be especially interested, for many diseases are observed in infancy which are rarely or never seen at other periods, or present peculiar features not observed at other times of life—of the greatest interest to the physician, for at this stage of life the largest portion of sickness occurs. It is no longer necessary to prove that pediatrics is a specialty, and no branch of medicine is of more importance or deserves closer and better attention. To this the profession accedes, and practical results justify the claim. It is true that pediatrics covers a large field, and the limits are not so definite as are other specialties, its termination being age only, while other specialties are limited to certain organs. It is a very difficult problem to compare things so widely diversified. The impediments and obstructions in the practice of pediatrics are many and varied. The young physician aspiring to this subject soon finds that there are frequent difficulties to overcome. He will not find all of the difficulties and defects in his patient, but will often find some of the most important ones in himself. His personality must be considered and studied, for often important and serious defects can be discovered and removed which would otherwise injure a successful career; and further, any physician without an overmastering love for children or lack of patience, need not prepare himself for this specialty. Without these qualifications his sphere of usefulness will be limited.

Bear in mind that sincere devotion to the cause of infant humanity is not always rewarded by reaping the largest financial prize in the practice of medicine, for many reasons. We will call attention to a few of the most important ones. It is impossible to attend as many patients as in adult practice, if the physician fully imparts his whole duty to his patient. Observation requires time and without particular pains in this respect no one will meet with success as a pediatricist. Observation often has a greater bearing on the case than a physical examination. What the attendants have to say requires the closest attention. No matter how tedious the story, or how long it lasts, bear it with the patient. Further time is also consumed by questioning the attendant and educating them at every visit. A minute study of the environments in all cases is very important. Often obstructions are discovered that are easily removed, and the removal will clear the way for victory, which otherwise would be lost. Do not neglect the little things or pass them by unnoticed. Frequently they are the sentinels along the highway, and if collected as we pass they will be the means by which the dreaded foe Death can often be conquered.

It happens in many cases that the physician is the only friend of the little patient. It is nothing unusual for physicians in this line of practice to meet with ignorance, criminal neglect, and more often than is supposed—the heinous crime of criminal intent. Another very important point to con-

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sider, and one that deserves closer attention, and we are sorry to say is often neglected, is the preparation of the food. A vast number of little patients are visited every year by the grim monster Death, and many others are dwarfed in body and mind, resulting from ignorance or neglect in not preparing the food in the right chemical proportion. This happens among all classes. The children of the wealthy suffer very often after they are fed upon dainties and nicknacks without thought of what the body chemically requires for development of a strong body and mind. It is to the best interest of the physician (and his duty) to see that close attention is given in carrying out his instructions. His success depends largely upon the way the attendants follow his advice and administer and apply the remedies. It is necessary that the pediatricist be thoroughly acquainted with dermatology, syphilis and the nervous diseases usually met in childhood. The chemistry of milk and foods suitable to infancy and childhood are of special import, and a thorough knowledge of this subject should be required. If these few points to which we have called your attention be attentively studied and followed the mortality of infancy and childhood, which is now alarming, could be largely reduced.

How sad to reflect on the frightful mortality of infants and children, and the reflection is saddest and more surprising when the fact is realized that the greatest mortality is in countries where the people boast of their knowledge and enlightened environments. Surely nothing but inhumanity can account for this great sacrifice of human lives. The day is dawning and prospects are growing brighter for the reduction of the mortality of our little people. This subject is now receiving more attention from pediatric writers than usual—really it is receiving more consideration than any other branch of the subject—still there is much room for discussion and more elaborate treatment would be of decided benefit to the children. Every year brings to light information and new appliances which, if properly used and applied would result in saving children which, under the past surroundings and conditions would have perished. Lifting the burden of infant mortality depends largely upon the medical fraternity. Realizing our responsibility, it behooves us as members of this great body to put forth increased efforts to ascertain the cause of disease and death and to devise methods whereby the perils and evils which beset the pathway of infant humanity may be lessened and its suffering and pain be alleviated.

A majority of deaths occurring in childhood are either the direct or indirect results of preventable causes, more especially those resulting from contagious diseases. These are facts that no qualified physician will dispute. More harmony would exist and better results be procured if the State health department, the local boards of health and the medical profession would form a campaign for the purpose of checking the fearful and needless waste of humanity. It is the duty of every physician to assist the health boards of their counties and the State to enforce the laws of registration of births in order that we may have a more accurate measure of the problem and our success be greater in meeting the problem of infant mortality. Evidence prompts us to say that it is the duty of every physician, and to his interest, to make a special study of the cause of death occurring under one year of age that comes under his care, paying strict attention to whether the infant derived its sustenance from the breast or was fed artificially. In certain localities the sanitation can be extensively improved, and as the improvement progresses the death rate will decrease in accordance. Sanitation is the best weapon that we have access to for the prevention of disease. Education of mothers and those who care for the children is another very important and essential feature. They should know how to keep the home, prepare the food, and how to use it after preparation.

Many valuable and priceless suggestions could be given those who have charge of the home if we would take the time to study the environments of every home that is intrusted to our care.

Another point of much value and one which should receive more consideration is the quarantine regulation pertaining to contagious diseases. This law should be extended so it would include diseases which it ignores at the present time. The importance and value of enforcing the quarantine law is not generally understood or its true value realized by the laity. The majority are impressed with the idea that this law interferes with their rights and liberties, hence their objection.

Unfit parentage is another fact worthy of consideration. The taint of heredity is of great importance when the child's welfare is considered. Without taking any thought for the welfare of the future generations, and the burdens placed upon society, we have permitted the insane, epileptics, criminals, idiots and degenerates and those afflicted with syphilis and tuberculosis, to marry without examination as to fitness, thus allowing them to produce afflicted and degenerate offspring and thereby placing upon the State an enormous expense, and untold burdens upon society, beside the pain and suffering endured by the innocent and helpless scions of humanity. When we come to consider it, it is a regrettable fact that marriage licenses are easily obtained in our country. To obtain a license to pursue our trade or profession the State does not hesitate in requiring us to present evidence that we are sufficiently qualified to perform the service required by the profession or calling to which we aspire. How much more important to the State should be the issuing of marriage licenses. We favor a law that will require parties seeking marriage licenses to produce qualifications as to health and ability, that the innocent may not suffer for the guilty. We have advanced means for producing better livestock. We cannot see why humanity, of much more value, should receive so little consideration. A strong, healthy race is absolutely necessary to good government and it is our duty to lend a helping hand in order that the coming generation may be stronger than the one preceding. We will welcome the time when our grand State of Oklahoma shall fall in line with other States that have passed laws regulating heredity. It is impossible to consider all pertaining to this subject in the limited time at our disposal. The importance of what we have said no one will deny. In presenting these suggestions and facts we have presented nothing new. Our purpose in presenting them is to impress the importance of their bearing, and that every physician should be encouraged to strive harder to do his whole duty, that infant mortality may be diminished, and the welfare of the children of our country may be made better.

CHAIRMAN'S ADDRESS, SECTION ON DISEASES OF EYE, EAR, NOSE AND THROAT.*

By D. D. McHenry, M. D., Oklahoma City, Okla.

As chairman of the Eye, Ear, Nose and Throat Section, I bid you welcome to this meeting. Remember, it is your meeting. We hope and expect each one to enter into the discussion and give us the benefit of your experience.

First, I want to thank you for the honor conferred upon me by making me your chairman, which came entirely unsolicited and unsought. The place has been so ably filled by my colleagues in the past that I fear I may not keep up the standard. I certainly appreciate the honor and again thank you for it.

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I have a few different ideas of a chairman's address than are usually expressed in such papers. I do not think any man is justified in putting forth his "pet" ideas to a body of his intelligent colleagues who are not permitted at that meeting to reply in discussion. So this will be very short, a very brief review of the progress of the past year, and a few words of suggestion for the betterment of our specialty.

The program this year, as you have probably noticed, is short. I have attended this section for the past five years, and at each of those sessions the last few papers have been read after more than half the members of the Section had left the meeting place. There was not time for proper discussion. I think this an injustice to the men who took their time to prepare the papers, and I sincerely hope this does not occur this year, and I am trying to prevent it.

I endeavored to fill the program with men who have not appeared before our Section during the past two sessions, hoping thereby to interest more of our colleagues in the work. Some of the old wheel-horses very nobly stepped aside and allowed me to do this, for which I thank them. I was not entirely successful in this, in that I wished to make the program partly clinical—a thing which has been so successful in the Central Medical Society. To do this it was necessary to get these clinics from men close to Bartlesville, so I have asked Drs. Cook and Roth, who have appeared on the program in the past two years, to present clinics. We hope to have a free discussion of these papers by the older members of this Section, as well as the new ones.

The progress of our specialty the past year has been very satisfactory. In ophthalmology more stride has probably been made, thanks being due to the general surgeon and internist, in the field of preventive infections in eye injuries. We are today saving many an injured eye that was formerly sacrificed. The great danger of sympathetic inflammation yet makes us always tearful of taking risks. I want to issue a warning that we do not go too far in this direction and so have a wave of sympathetic trouble following.

The treatment of tuberculosis of the eye is being very ably studied by many of our colleagues, and some progress is being made. We have also learned much in the use of salvarsan in the treatment ofluetie lesions of the eye, that many of the dangers we feared were not real. The improvements and modifications of the West operation are giving us good results with less bad after effects than the older operations in the treatment of tear-sac cases. I think we are also more definitely settled as to the operative treatment of glaucoma than a year ago. The very valuable Elliott operation in certain forms of glaucoma has been found not to be as successful as some of the older operations in other forms of this disease. Such results are always to be expected from any new method.

The continued study of blood pressure has been a great help to the oculist in the study of glaucoma, as well as in the treatment of conditions often due to a low blood pressure, such as detached retina, etc.

In the field of rhinology and laryngology we have made some advancement. The ideas of more thorough and painstaking treatment of the nasopharynx and eustachian tube as advocated by Holmes and many others a few years ago is becoming more generally used, and we are getting better results in these chronic catarrhal ear cases with improved methods of treatment than formerly.

In nasal conditions more careful study of the infecting organisms and the treatment by bacteria and serums have kept pace with the internist. Many of our men are doing excellent research work in the treatment of hay fever along this line and in the use of injections of emulsions of ragweed, etc.

In suspension laryngology, first advocated by that master of larynx and tracheal work, Killian, we are able to remove many growths that were formerly inaccessible, and to intelligently treat conditions that we were unable to reach before. It marks a great area of advancement in this special line of work, in my opinion.

The work of Billings, Rosenow, Jackson, Beck, Davis and many others in searching for the focal infection of chronic diseases and the finding of many of the same in the chronic sinusitis, tonsillar and peritonsillar abscesses, have caused the general practitioner to much more often want to take the rhinologist and laryngologist into the chronic cases with him than ever before.

We have probably carried the tonsillar question in some cases too far. But yet many cases are still being treated by the general physician—first one and then another—which, if put into the hands of an honest, conscientious special man, he would find this focus of infection, either in the tonsils or in a sinus. These men have been very instrumental in placing this fact before the general practitioner. We should assist in continuing this education, first, by proving this fact as often as possible, and, second, by being very careful that we do not attribute too many general diseases to these conditions in which we are unable to find any connection. In this education of general men we have yet much to do. There is still a great tendency among them to tell the parent that Johnny will outgrow his bad hearing; that Mary's injured eye will get all right—just give it a little time; until it is too late to give these cases any benefit.

Within the past year I have had three cases sent to me, after one to four weeks treatment of an inflamed eye, to find a small foreign body imbedded in the cornea, easily seen by any one, to be the cause. Have had three cases of furunculosis sent to me to be operated upon for mastoiditis, and in one had a very difficult task to convince one of the leading surgeons and one of the leading internists of Oklahoma City, who were in the case, that we were only dealing with furunculosis of the external canal and not a mastoiditis, and, in fact, I question if either of them were convinced until the patient fully recovered after free incisions of the external canal. When such a case as this occurs, it is not an easy one to diagnose; the other two were. I think the general practitioner needs a little education along this line, and some of us should write a short paper in the near future on the diagnostic points between mastoiditis and furunculosis.

One of the most difficult things for us to do in such cases as those just mentioned is to protect the general practitioner and not damage our patients. This I think we should always endeavor to do. Protect the physician's diagnosis even if it does not entirely coincide with ours, if we can do it without damage to the patient. Do not misunderstand me. The patient's interest must always come first, but if the physician's mistake can be covered without damage to the patient, I insist it is our duty to do it.

The increasing value placed on the systematic examination of school children has also tended to place our specialty on a higher plane with the laity. Parents are placing much more reliance on what the school doctor tells them than ever before. They are becoming better educated on the damage done to hearing and general health by adenoids, and recognizing that poor sight is the cause of many children lacking an interest in their school work, being called backward and dull, and even the cause of most truancy.

The laity should be taught much on the hygiene of reading and near vision. Each of us daily see eyes that have been injured by improper and incorrect positions of bodies, books and lights. Who are to correct these abuses, if not we?

There are many questions that yet need much study; much yet to be learned of the treatment in chronic middle ear troubles; still very much difference of opinion on proper methods of cataract extraction, and proper operative treatment of glaucoma; much yet to be hoped for in that unfortunate class who have lost an eye; in better methods of enucleation to give them the least deformity, or rather in the question of safety of evisceration and transplantation of foreign substances in the sclera.

This should stimulate us to do more thinking, to make more use of the clinical experiences which we daily have, and I hope each of us may in this meeting impart some new idea to his colleagues and also take something from them. But, above all, I hope each of us may go home and do a little more studying and thinking on these unsolved problems.

SCOPOLOMIN-MORPHIN "TWILIGHT SLEEP."

An exhaustive and most painstaking investigation of this system has been reported by J. L. Baer, Chicago, Journal A. M. A., May 22. The very high percentage of complications should sound a warning to the profession, even if Baer's statement: "Who can read such statistics, knowing the care with which this work was done and the safeguards that were thrown around the cases, and not feel out of patience with those who seemingly are trafficking in the natural fears of pregnant women," does not impress them. Sixty cases were in the series, not counting those which would probably develop pathologic condition; so it may be said that the cases selected were as nearly fitted to receive such treatment as could be had. Twenty-six cases were not successful, one of the number dying from ruptured uterus, several extremely delirious and mentally incapacitated. Asphyxia of the infant was more than common. This is borne out by all of us who have occasionally used morphine, hyoscine, cactin in obstetrics. Seven cases were "a little successful"; eight partially so; five fair; eight good; six completely successful. Those who are inclined to fall in with the hysterical propaganda being pushed by certain sensational lay publications, or who are inclined to take up this foolishness to boost their private practice, should ponder these facts well. The least a bad result in such matter could produce would be unlimited criticism, and possibly the matter might not end short of ruin to the practitioner.

THE NATIONAL ANTI-NARCOTIC LAW.

The attention of the members of the State Medical Association is called to the correspondence column in this issue. A letter from Mr. Hubert L. Bolen, Collector of Internal Revenue, throws considerable light on this subject, which is very little understood and is liable to much misunderstanding on the part of physicians and druggists. We suggest a close reading of this correspondence.



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DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

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THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

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Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL

THE BARTLESVILLE MEETING.

Scheduled to hold sessions during May 11-12 and 13, this meeting, despite an early and ill-advised adjournment, demonstrates the fact that one of the small cities in this State, with the proper spirit of unity prevailing, may hold an exceptionally successful meeting. It will be news to the rank and file who do not ordinarily attend these meetings, to know that for a long time it had been predicted in certain quarters that the meeting could not and would not be successful, due to the rather isolated location of the city and its consequent lack of accessibility to many parts of the State. Those who attended the meeting, having no personal interest in its outcome or bias in the decision, state that it was not only successful from the standpoint of scientific production and delivery, considering that only one short day was devoted to the program, but that the social features—that is, those the citizens and profession were given an opportunity to present—were exceptionally good and ranked most favorably by comparison with any we have ever had.

The hotel facilities were taxed, especially the larger one, but at that every guest was comfortable and the service was prompt and efficient; the food was good and wholesome and there was not the slightest disposition to take advantage by overcharging the guests. The citizens themselves were extremely hospitable and ever ready to extend the little niceties so pleasing to a visitor. The Mayor was present in person on all occasions and made it his business to assist the various local physicians in providing comforts for every one. It is doubtful if there has ever been a state meeting where the local physicians made it a point to extend so many little helpful courtesies to visitors as was done by the profession of Washington County on this occasion.

It is a historical fact applicable to every meeting we have had that the election of officers, the first order of business of the morning of the last day of the session, is the signal for the near departure of the attendants, and, in this instance, the holding of the election on the night of the second day of the meeting, at a time when the banquet and similar social activities were at their height, not only vitally detracted from those set social activities—hospitalities that no other pressure, according to fixed and well-recognized social procedure should be permitted to abrogate—but brought them to practically an abrupt end. It is regrettable that our Association has been placed in the embarrassing attitude of apparently displaying such wanton social discourtesy as was evidenced by this precipitate and unlooked for action. It is just here to state that the Bartlesville physicians made no disparaging comment on this action, but assumed the precise and proper attitude a seasoned host would have assumed in the face of such an unusual affront. On every side the hope was expressed that we might never again face such an action.

OUR JULY ISSUE A CANCER NUMBER.

Through the leading suggestion of a committee of the Pennsylvania Medical Society, the July issue of nearly all the Journals in the United States will be devoted to the consideration of cancer in various phases. In this connection it has been suggested by the Committee and by our own Cancer Committee to our County Societies that every society of our State hold at least one meeting devoted to the especial consideration of that important subject.

There is not a doubt in the minds of those who think over and study the subject that the profession, in part, could do more than is done for the suppression of cancer by paying more attention to the early signs of the disease and by proper advices to their clientele. Every practitioner is confronted with this problem. The plea, "I do not operate," "I am not a surgeon," is fearfully vitiated by the results of a too late diagnosis, or disregard for the little warning signs often so patent, if they are only looked for. The family physician is the man, and the only one, who has the opportunity for scenting out these early signs, for to him goes the patient with every "little lump" in the breast, the "irregular bleedings", the apparently "harmless" growth, any of which, if left alone, may sooner or later doom the patient, who deserves better treatment, to an untimely end. The time to cure cancer is before there is a cancer, and it is the object of this widely published propaganda to awaken every possible interest in the general practitioner to the importance of his function in this respect.

PERSONAL AND GENERAL NEWS

Dr. J. Culbertson, Whitefield, has moved to Maud,

Dr. G. H. Phillips has moved from Seminole to Maud.

Dr. R. R. Hume has been appointed city physician of Minco.

Dr. S. B. Jones, Sallisaw, has returned from a visit to the Mayo clinics.

Dr. McLain Rogers, Clinton, is in Chicago doing postgraduate work.

Dr. T. B. Hinson, Thomas, has returned from an extended trip to the clinics of Chicago.

Dr. Chas. D. Ferguson, Oklahoma City, has recovered from an operation for appendicitis.

Dr. J. T. Bird, Ingersoll, is in San Diego, California, where he is preparing to take the California State Board Examination.

Dr. D. A. Myers, Lawton, who was seriously injured in April when his car ran over him, has recovered sufficiently to take up his usual work.

Dr. LeRoy Long, McAlester, whose son, Wendell, was operated on at Mercy Hospital about May 14th, has returned. Dr. Long states the boy is doing fine.

Dr. Fred R. Sutton, Bartlesville, has had the misfortune of undergoing several surgical operations recently and it is feared will have to be operated again.

Dr. John B. Murphy, Chicago, lost a brother-in-law and sister-in-law on the Lusitana, Mr. and Mrs. Plamondon. Mr. Plamondon was a brother of Mrs. Murphy.

Dr. Catherine Threlkeld, Ada, is enjoying the distinction of being the only woman county health officer ever appointed in Oklahoma. She was recently commissioned by Dr. Duke.

Dr. J. M. Bolger, Poteau, secretary of LeFlore County Medical Society, has been in Little Rock in a sanitarium during a part of April and May. His health is considerably improved.

Dr. Ross D. Long, Oklahoma City, will go to England in June on special duty for the English Government. It is stated that 32 men have been appointed to this duty, which will consist of caring for England's sick and wounded brought from the seat of war to the Island.

Dr. M. T. McDowell, Sallisaw, narrowly escaped death from a pistol shot which ploughed its way through his scalp. The shot was fired as a result, it is said, of criticism on the physician's part of a man who he claimed was operating a "club" next door to his office, and to which he objected.

Dr. B. E. Ward, Noble, while under the influence of liquor, murdered his wife by plunging a knife into her heart. He was removed to the Cleveland county jail and a mob overpowered the sheriff during the night, carried Ward a short distance from town and hanged him. On a previous escapade he was adjudged insane.

Dr. John W. Nickson of Loco, Stephens County, was accidentally drowned in Nigger Prong Creek Sunday, April 25. He had crossed the creek on the bridge and afterwards, in attempting to avoid a slough, drove back into the creek. This is the assumption as to the occurrence, as no one was present. The body was recovered the next day. Dr. Nickson leaves a large circle of friends, as he was very popular in his country. A wife and four children survive him.

Drs. Leila E. Andrews and A. A. Will, Oklahoma City, have been made the victims of a malpractice suit. The plaintiff alleges among other things that she was of "fair and symmetrical proportion, comely of feature and prepossessing in demeanor, name and disposition, was favorably impressed with marriageable men of discriminating judgment of her own age and condition in life and was herself favored by such men of great wealth." While press dispatches do not say, it is inferred that she is not now so, according to her ideas. She wants balm to the extent of \$20,000. Dr. Will states he never heard of the woman.

Dr. L. M. Overton, Fitzhugh, was the victim of a terrible accident while in Ada a few days ago. A car driven into the entrance of a garage knocked him down and he received injuries from which it is doubtful if he will ever entirely recover. His skull was fractured, necessitating the removal of considerable depressed fragments and brain substance. His left clavicle, and radius and humerus near olecranon was also fractured. Dr. Overton at the time of going to press was able to be removed to his home, but his attending surgeon, Dr. Cummings of Ada, states that it will be many months before he will recover, and is doubtful as to the completeness of that.

HOUSE OF DELEGATES.

Met at 8:00 O'clock, Tuesday Evening, May 11th, M. E. Church, Bartlesville.

Meeting was called to order by Dr. John W. Riley, president.

The following were appointed to serve on the Credential Committee: Dr. C. W. Heitzman, Dr. W. G. Blake, Dr. T. A. Blaylock.

Committee on Resolutions: Dr. A. D. Young, Dr. D. Long, Dr. F. H. Clark.

Dr. Riley: We will now have a report from the Committee on Legislation.

Dr. Duke: Mr. President, Dr. Salmon of Oklahoma City has a report on that committee. I might briefly state the work done by the committee. The principal work was to prevent the Chiropractic Bill. We decided it

would be better to work on that. We made some amendments to the present law governing the licensing of physicians, which would have become very effective if it had become law. We also had the Chiropractic Bill die in the Senate. That is about the gist of the matter of legislation at this time. The law governing the practice of medicine is effective, as it was before.

Dr. Young: I move you that the report of the committee be accepted and the rest of the report be handed in by Dr. Salmon. Seconded.

Dr. Riley: It has been moved and seconded that the report as given be accepted and the rest handed in by Dr. Salmon. Motion carried.

It was moved and seconded that the reading of the minutes be omitted inasmuch as they had been published. Motion carried.

Dr. Riley: We will now have the report of the Secretary.

Dr. Thompson: Gentlemen, I herewith submit the following report. (Reads report.) Last year we had a proposition before the House of Delegates to amend the Constitution and By-Laws in many respects, and the amendments were passed except that referring to the one on membership, which is Chapter 1 of the By-Laws. It was proposed to amend that chapter as follows (reads), and after that section we would add that when charges are preferred by either party the council, after a hearing, shall take such action as it may see fit.

Moved and seconded that amendment as read by Dr. Thompson be adopted. Carried.

Dr. Young: I move you that, beginning next year and every year after until this motion is rescinded, that the Secretary be instructed not to put any one on the program who is not in good standing when it goes to press. Seconded.

Dr. Riley: It has been moved and seconded that no member who is not in good standing when the program goes to press shall be placed upon this program. Carried.

Adjourned to general meeting.

House called to order by the president, Dr. J. W. Riley.

Invocation by Rev. J. E. Coe.

Address of Welcome, Hon. C. A. Lamm, Mayor of Bartlesville.

Mr. Chairman, Ladies and Gentlemen: It certainly affords me very much pleasure to be able to at least attempt, in a few words, to extend to you a welcome to our city. We, as a city and as a people, feel highly honored to know that we have a profession meeting with us that stands pre-eminent of all, as does yours. In meeting some of the members of the profession today they asked me if we had a key to our city. We have a long time ago abandoned the idea of having gates or walls to be unlocked, or keys to unlock them with.

No doubt when the committee decided to meet at Bartlesville, you hesitated to come to our city for the reason that we were not centrally located. We realize that many of you have had certain hardships to put up with in coming to our city on account of the location in this part of the State, and probably a hardship on account of the railroad facilities. However, we can only say on behalf of our city, that we are glad to welcome you here and I know that the entire city, citizens, one and all, intend to make it a pleasant stay for you while you are with us.

We regret the fact that there are not more ladies present. The ladies, we know, hesitate going to a convention of this kind. Probably they have an idea that the husbands do not want them along. Sometimes there are no arrangements made to entertain the ladies. I will say for those present

here tonight that our ladies have made special arrangements for those who are here, and they will be highly entertained. In fact, our ladies are somewhat disappointed that there are so few visiting ladies here.

Now, I can only say on behalf of our people, that Bartlesville bids you welcome to our city. We trust that when you go away from our city that you will feel glad that you came, and we intend to make you feel sorry when the time comes for you to leave.

I am not a public speaker; I can only again say, I welcome you to Bartlesville. We hope your stay will be pleasant, and we hope at some future date we will again meet you.

Piano Solo.

Response to Mayor's address by Dr. J. W. Duke, Dr. A. K. West, who was on the program for the response being absent.

Dr. Duke's Address.

Ladies and Gentlemen of the Oklahoma State Medical Association: Dr. A. K. West of Oklahoma City was delegated to make this response and he is not here, so I have been pressed into service. I am glad I am here. This is my first visit here. This is a very beautiful city, and you have given us a very cordial welcome, which we all appreciate. I am glad to be a member of the profession that meets here. I do not think there has been a time in the history of the world when the medical profession was of as much importance as it is today. With the exception of the clergy, perhaps, ours is the only profession that works for conservation of life and peace. At this particular time, when the nations are at war, it is the physician who eases the last struggle of the dying, who administers to the enemies as well as their friends. They labor constantly for the welfare and confidence of their people. More than that, it is the only profession in the world, the only body of men, who have striven constantly all their lives to destroy their own living. They have devoted their time to the study of preventive medicine. We would be glad indeed if today we could destroy all the enemies of mankind and make it possible for there to be no more sickness and no more doctors; but, unfortunately, we have not arrived at that millenium yet, and as the world stands now it will be a long time until we do, if ever. Preventive medicine is the greatest thing of all, for curing is not so hard as preventing disease. When we can accomplish preventive medicine we will have accomplished a great end and done a great good. A doctor always devotes himself to the public. He is called and goes, at all hours and all times and all conditions, and under all circumstances, and usually without expectation of receiving any compensation, and they are often not disappointed. There are few doctors who have accumulated much of this world's goods. The annual income of the medical profession is something less than \$600 for the individual per annum. When you think of the small sum for the arduous work they do, it must be they love the work, and to relieve the suffering of their fellow-men. I am glad we are here, and I am sure Bartlesville will take care of us royally.

Piano solo.

Address by the President, Dr. J. W. Riley.

Vocal solo.

Next was to be address of the Fraternal Delegate from Texas State Medical Association, but he was not present. Dr. Riley, president, read the following telegram from him: "Cannot come. Tied up in court. Regards to the boys. God bless you. Dr. D. M. Higgins."

Report of Committee on Necrology, which is as follows:

"Mr. President and Members of the Oklahoma State Medical Association: The Necrology Committee respectfully reports that within the past year the Loving Father has called to their Heavenly Home ten members of this Association, and we beg leave to present the following resolutions:

Whereas, It has pleased the All-Wise Father to summon to the eternal reward our esteemed fellow-members, Drs. Lafayette Coffman, of Peggs, Cherokee County; J. H. Barr, Reed, Greer County; J. S. Fuller, Fort Gibson, Muskogee County; W. E. Henderson, Shawnee, Pottawatomie County; K. Dennison, Garvin, McCurtain County; Ben Davis, Kinta, Haskell County; P. C. Woodruff, Stilwell, Adair County; J. S. Childs, Purcell, McClain County; J. W. Nickson, Stephens County, and W. R. Bevan, Oklahoma City, Oklahoma County; and,

Whereas, All these men were members of this Association, all men conscientious in the duties of their profession, men whose lives of helpfulness made their value to their communities inestimable to their friends, beyond words;

Resolved, That the Oklahoma State Medical Association hereby express its admiration and respect for these men and its deeply felt loss, and extends to their families sincere sympathy; and,

Resolved, That a copy of these resolutions be mailed to their families and that these resolutions be published in the Journal of the Oklahoma State Medical Association.

(Signed) NECROLOGY COMMITTEE,
J. T. RILEY,
A. D. YOUNG."

Meeting of Committee of Council on Medical Defense.

May 11, 1915.

Dr. Walter Wright: The committee reports to the Council, upon thorough investigation of the Bureaus of Medical Defense now successfully operating in a number of states, that they deem it advisable to place the Bureau of Medical Defense in operation in Oklahoma as soon as possible, and for that purpose recommend that the Council instruct the Secretary of the Oklahoma State Medical Association to assess a membership fee of three dollars (\$3.00) per member, upon every member of the Oklahoma State Medical Association, to become payable upon July 1st, 1915, and to be used for the purpose of placing the Medical Defense Bureau in operation, and its maintenance until January 1, 1916; also that the Secretary be instructed to make such preparations and expenditures as to place the Medical Defense Bureau in operation as soon as practical.

The committee also report that upon investigation we believe that the Defense Bureau can be operated for an annual assessment of one dollar (\$1.00) per member, which shall be included in the dues for 1916 and thereafter.

W. E. WRIGHT, Chairman,
P. P. NESBITT,
W. S. WILLOUR.

Dr. Riley: Moved and seconded that the report be adopted. Any discussion? If not, all in favor say "Aye." Contrary "No." Report adopted.

Dr. W. E. Wright, Dr. Slover and Dr. Cronk appointed Audit Committee.

Dr. Riley: I entertain a motion to suggest to the House of Delegates to discuss the proposition of a permanent place for the Medical Society to meet.

Dr. West: I think it would be better to have it meet in three or four different towns.

Dr. Wright: I move that the Council recommend to the House of Delegates that Oklahoma City, Muskogee and Tulsa be designated as the meeting places for the Oklahoma State Medical Association, and that the Council be empowered to select one of these three places to hold a meeting. (Lost for want of a second.)

Dr. Riley: I have talked this over with Drs. Colwell and Green and those fellows and got all the information I can. The only way is to have a certain permanent location, to get data on all matters in regard to disease, social subjects, etc., to collect this information, or to have it there so if Dr. Wright comes up from Tulsa, or any other person comes for information, that they will get it. This is the only way to have it on a stable foundation.

Dr. Thompson: I make a motion that the meeting place hereafter shall be selected by the Council; that it shall be restricted to the three largest places in the State.

Dr. Wright: I move that the Council recommend to the Delegates of the Oklahoma State Medical Association that the meeting place of this Association be restricted to Oklahoma City, Muskogee and Tulsa.

Dr. Nesbitt: Second the motion.

Dr. Riley: All in favor of this motion make it known by saying "Aye." Contrary "No." Motion carried.

Dr. Wright: I move that the Council recommend to the Delegates of the Oklahoma State Medical Association that the Council be empowered to designate which of the three cities be selected as meeting place from year to year.

Dr. Workman: Second the motion.

Dr. Riley: All in favor of this motion make it known by saying "Aye." Contrary "No." Carried.

Dr. Wright: I make a motion that Article 9 be amended by the addition of Section 4, to read as follows: "In the first meeting after the adoption of this amendment, a president and a president-elect be selected by the House of Delegates; the president to assume immediate charge of office, and the president-elect to assume active charge of office one year following the date of his election; and at every annual meeting thereafter there be selected a president-elect who shall assume his duties one year from the date of his election.

Dr. Thompson: Second the motion.

Dr. Riley: It has been moved and seconded that the amendment as read be adopted. All in favor of this motion let it be known by saying "Aye." Contrary "No." Carried.

Adjourned.

PROCEEDINGS OF HOUSE OF DELEGATES, MAY 12, 1915.

Meeting called to order by the President.

The Committee on Credentials reported those entitled to seats with the exception of Tulsa county, on which a contest was filed by Dr. Ross Grosshart, who asked to be seated in the place of Dr. N. W. Mayginnes. This was referred to the Council.

The Council reported to the House the following recommendations:

1. That hereafter the permanent meeting places of the organization be limited to the cities of Tulsa, Muskogee and Oklahoma City.
2. That the Council select the time of meeting.
3. They offered an amendment to the Constitution and By-Laws providing for the election of a president in the usual order as heretofore, and the election of a president-elect, who shall take office one year from the date of his election, and that the same order of election is to be followed annually hereafter. This was ordered filed and to take the same course as other amendments to the Constitution and By-Laws.

Moved by Dr. A. D. Young that we do not concur in the first recommendation of the Council. Seconded by Dr. F. H. Clark. It was moved and seconded that the motion be tabled. Motion lost.

A substitute motion was offered by Dr. J. W. Duke to select meeting place as heretofore. Both motions declared out of order.

Moved and carried that the report of Council be accepted and taken up for consideration. Moved that the report be made a part of the House record and accepted with the addition of Guthrie to the meeting places. A negative substitute motion was offered. Both motions were declared out of order.

Moved by Dr. Grosshart that Oklahoma City be made the permanent meeting place. Moved by Dr. Duke that the House of Delegates be allowed to select each annual meeting place as heretofore. Moved by Dr. J. M. Cooper that a committee be appointed to report on advisability of establishing a permanent hall for library, meeting place, etc., for the Association; committee to report in one year. Motion lost.

Moved by Dr. F. H. Clark that a committee be appointed to investigate the question of a permanent meeting place and to report before end of this session. Motion lost on roll call.

Moved by Dr. A. D. Young that recommendation of Council as to permanent meeting place be rejected.

Resolution was offered to amend Constitution to allow House of Delegates to select a permanent meeting place at any time it so desired.

Motion by Dr. F. H. Clark carried to instruct the Secretary to take a referendum vote before January 1st, 1916, on question of permanent meeting place.

Moved by Dr. F. H. Clark that the second recommendation of Council be not adopted. Carried.

A telegram of greetings and congratulations was received from Dr. Seale Harris, Secretary of the Southern Medical Association.

Dr. F. H. Clark, Secretary of the Medical Association of the Southwest, made announcement of the coming meeting of that body in Oklahoma City and invited those present to attend.

An Auditing Committee of the Council, consisting of Drs. W. E. Wright, J. T. Slover and Fred Y. Cronk, made the following report: "We, your committee, find the statement of the Secretary-Treasurer correct." Moved and carried that the report be accepted.

Moved and carried that any member whose name appears upon the printed program of any meeting of the State Medical Association, who fails to appear in person to read his paper or fails to give a plausible excuse for his absence and failure to have his paper read, shall be barred from appearing on any program for three years.

Proceedings of House of Delegates, May 12, 1915, 8:35 P. M.

The President presiding.

Moved by Dr. A. D. Young that the House of Delegates request the Council to appropriate \$400 for the purpose of securing a definition of the practice of medicine. Motion withdrawn.

Moved by Dr. F. L. Watson that a committee be appointed to secure definition of practice of medicine. No second.

Moved by Dr. C. A. Thompson that the President, State Commissioner of Health and Dr. J. H. Scott be appointed to confer with Attorney-General Freeling and bring the matter of definition to his notice. Carried.

It was then moved that the House proceed with the annual election. After much discussion a motion prevailed to ask unanimous consent to set aside the By-Law providing for election of officers as the first order of business of the last day of the session. The President declared this motion carried and, after much discussion and various motions, the election was proceeded with and resulted as follows:

President, Dr. J. Hutchings White, Muskogee; 1st vice-president, Dr. Walter Penquite, Chickasha; 2nd vice-president, Dr. L. T. Strother, Nowata; 3rd vice-president, Dr. W. A. Cook, Tulsa. Councilors were elected to fill vacancies as follows: 3rd district, Dr. G. P. Cherry, Mangum; 5th district, F. Y. Cronk, Guthrie, re-elected; 9th district, _____; 10th district, Dr. R. L. Mitchell, Vinita. Delegate to A. M. A., Dr. John Riley, Oklahoma City. Meeting place, Oklahoma City.

Adjournment.

Proceedings of House of Delegates, May 13, 1915.

The meeting was called to order by the Vice-President, Dr. W. Albert Cook, Tulsa, on the following petition:

"To the President of the Oklahoma State Medical Association:

We hereby petition and request you to call and notify you that there will be held a special meeting of the House of Delegates of the State Medical Association in Bartlesville, on May 13th, 1915, at 12:01 a. m., for the purpose of holding an election of officers of said Association and transacting any other business properly coming before it.

(Signed) D. Long, C. W. Heitzman, J. L. Shuler, H. M. Williams, E. F. Davis, Ross Grosshart, H. Murdoch, W. W. Jackson, H. C. Webber, C. A. Thompson, J. T. Slover, W. E. Wright, T. A. Blaylock, D. Cummings, J. C. Watson, P. P. Nesbit, Carl Plunkett, C. V. Rice, Fred Y. Cronk, W. A. Howard, R. L. Mitchell, W. F. Hayes, Benjamin H. Brown."

The object of the meeting was stated by different members of the House. It was the consensus of opinion that there was no particular objection to the officers elected at the illegal and irregular meeting held the evening before, and that the object of the meeting was to legalize, so far as was deemed best, the action of the House.

The following is the result of the election held: President, Dr. J. Hutchings White, Muskogee; 1st vice-president, Dr. Walter Penquite, Chickasha; 2nd vice-president, Dr. L. T. Strother, Nowata; 3rd vice-president, Dr. W. A. Cook, Tulsa.

The following Councilors: 3rd district, Dr. G. P. Cherry, Mangum; 5th, Dr. F. Y. Cronk, Guthrie; 9th, Dr. J. T. Slover, Sulphur; 10th, Dr. R. L. Mitchell, Vinita.

Delegate to A. M. A., Dr. John Riley, Oklahoma City.

Meeting place for 1916, Oklahoma City.

Minutes of Meeting of the Council, May 13th, 1915.

The Secretary was instructed to proceed with the organization of the Medical Defense and to employ such assistance as was necessary. The Secretary was instructed that in view of the fact that the Resolution Committee had made no report and that the people and medical profession of Bartlesville had not been tendered a resolution whatever for their care of and hospitality to the visiting members, to draft a suitable letter to be forwarded to the Bartlesville papers.

REPORT OF LEGISLATIVE COMMITTEE.

To the Officers and Members of the Oklahoma State Medical Association.

Gentlemen: In submitting a report of your Legislative Committee, we acknowledge that seemingly the results are not commensurate to the time and labor given the cause. but our efforts were both constructive and destructive and our results show in preventing the passing of vicious measures rather than in the establishment of the laws that are most desired. We feel that our experience and suggestions will be of much advantage to the committee, who shall conduct the next campaign, as one is sure to be waged.

The only legislation your committee attempted was to have our present law so amended that the definition of what constitutes the practice of medicine would be "Any one offering to treat the sick," and to establish a fee to the prosecuting attorney securing a conviction of the offenders of the medical act.

The present law, as shown in the Harris-Day Code, is considered by many to be a good one, provided it were possible to get the county attorneys to prosecute its violators. The prosecuting attorneys use the present definition, defining who is considered practicing medicine, as a loop-hole to escape the odium of non-performance of duty, so it was considered advisable to have the law read "Any one offering to treat the sick," so that there would no longer exist a doubt of those amenable to the law.

The Chiropractors maintain the same lobbyist and present the same petition that has been presented every year since statehood. Their measure, asking for separate Board of Examiners, went through the Lower House without much opposition. There is no doubt that this measure would have passed the Senate but for the persistent efforts of your committee, together with the assistance so generously bestowed by the medical profession at large in constantly reminding the Senators of the evil consequences of such laws. It is with pleasure that we report to you the kindness accorded your committee by almost the entire Senate. Had we their permission, we would like to mention the names of the Senators who merit our lasting gratitude, and through other means we shall inform you whom of the legislators you should endeavor to return to the next assembly and, also, those you should, by a united effort, relegate to a forgotten past. The members in the Lower House were so thoroughly organized in their pledges to the Chiropractors that they turned a deaf ear and a dull brain to justice, reason and sense of self-protection. It should be your duty to investigate their attitude toward building the health of the state and it should be a pleasure to you to persuade the voters of your respective communities why they are unfitted to make laws that guard and protect the future of a commonwealth.

If any legislation is ever to be accomplished on behalf of the medical profession, it will be necessary to create a public sentiment that will de-

mand qualification in those who are to care for the afflicted and to see that the candidates for the Legislature are pledged to support measures that are favorable to those who strive to recognize the different diseases and the proper measure of preventing them, instead of creating laws giving every one but a physician the right to care for the sick. We suggest that the Legislative Committee be appointed at our last state meeting prior to the convening of the next legislature and that the committee formulate its campaign before the state primaries.

By this means the committee will be informed what are the sentiments of each member of the Legislature and what physician or friend stands nearest the law-makers. The time is too short after the legislature has assembled to gain the information that is often necessary to approach the members that may be adverse to our laws. Under the conditions that your committee has formerly labored, it has been too busy to answer the many letters addressed to it and, no doubt, has been unjustly censured.

We would like to impress upon each one of you that the laws that the committee is supposed to secure so occupies the time of the committee that it has no time to assist in passing the individual petitions that would be advantageous to certain localities. The introduction of such measures are usually confusing to the members of the Legislature, as they think they are a part of the laws that we, as a whole, are asking for. We recommend that until we have succeeded in establishing satisfactory laws that as few petitions as possible be presented outside of those made through your committee.

At a meeting of your committee, held in Oklahoma City, January 12, such changes of the present laws that were thought necessary were agreed upon and your secretary instructed to engage the services of an attorney capable of drafting them in a suitable and legal way, and positively forbidden to pay over \$100 for such services. Knowing that \$250 had been paid for similar services by the last committee, your secretary approached Judge J. B. A. Robertson with much fear and apprehension that he would refuse his services unless he could name his fee. After the purposes were explained and apologies of a small fee offered your secretary was assured that the matter should have due consideration and that we would agree upon fee. I left data of changes to be made in his hands and received instructions to return at a certain date.

Notwithstanding that all of the present law had to be reviewed and a stenographer had to be employed to make necessary changes, when the amount of fee was requested, Judge Robertson informed your secretary that there was no charges. It was explained to him that the money for such services was furnished by the physicians of the entire state to pay his fee. He replied that he owed a debt of gratitude to the medical profession; that he was glad to render this service as a partial payment.

In the embarrassment of having imposed upon Judge Robertson, your secretary knows of no way of showing his appreciation other than recording upon the pages of our history and our memories that in Judge Robertson we have a friend who appreciates our profession and is in sympathy with the laws that we are trying to establish.

The committee was somewhat handicapped by not having an entertainment fund, and we are sure if we had had \$100 to expend as we should have selected, we could have passed almost any reasonable medical law that we should have asked for.

The committee did spend between \$20.00 and \$30.00 entertaining some of the gentlemen who were kind enough to give us a conference lasting until

almost midnight. The expense of such entertainment was paid by the Oklahoma County Medical Association. Other expenses:

Stenographer	\$3.50
Stamps, Long distance calls, stenographer.....	6.00
Total.....	\$9.50

In contrast to this the Chiropractors, according to their own statement, spent \$1,259.13.

The Chiropractic Bill was known as House Bill No. 252 and, fathered by Simpson and Lemon, was an act to create a separate Chiropractic Board.

It was thought advisable to withdraw our measure as introduced by Senator Waters, and Senator McAlister offered the following amendment to the Chiropractic Bill (No. 252.):

"Senator Pugh moved that House Bill No. 252 be advanced to engrossment and third reading.

Senator Shaw moved that that motion be laid on the table and on that motion the roll was called with the following result:

Yeas: Blassingame, Board, Buckner, Burford, Carpenter, Davidson (of Muskogee), Edmonson, Fields, Franklin, Hickman, Keller, McAlister, McIntosh, O'Neill, Risen, Ryan, Shaw, Sutherlin, Waters, Wilson (of Canadian). Total, 20.

Nays: Austin, Barrett, Beauman, Beeman, Bickel, Chase (of Nowata), Cline, Cordell, Curran, Davidson (of Tulsa), Davis, Edwards, Hogan, Killam, Logan, McMechan, Mitchell, Pugh, Russell, Thomas, Tucker, Watrous. Total, 22.

Excused: Chase (of Seminole), Wilson (of Dewey).

Absent, 0.

The Chair declared the motion lost.

The vote recurred on the Pugh motion to advance House Bill No. 252 to engrossment and third reading.

Senator McAlister offered the following amendment:

"Mr. President: I move to amend Senate Bill No. 252 by striking after the word "Oklahoma" in the enacting clause the balance of page 1 and pages 2, 3, 4, 5, 6 and 7, and insert in lieu thereof the following:

Section 1. Section 6895, of the Revised Laws of Oklahoma, 1910, is hereby amended to read as follows:

Section 6895. Every person, before practicing medicine and surgery, or any of the departments of medicine and surgery, in this State, must have the credentials herein provided for. In order to procure such credentials he must produce satisfactory evidence of good moral character, and a diploma issued by some legally chartered medical school or college, the requirement of which medical school or college shall have been at the time of granting such diploma, in no particular less than those prescribed by the American Association of Medical Colleges, or the Southern Association of Medical Colleges, in the year in which the said diploma was granted; or he must show satisfactory evidence of having possessed such diploma or license from some legally constituted institution, which grants medical and surgical licenses only on actual examinations. He must accompany said diploma or license with an affidavit showing that he is the person therein named, and that the diploma or license was procured in the regular course without fraud or misrepresentation of any kind; such affidavit to be taken before any person authorized to administer oaths. The same shall be attested under the hand and seal of such officer, if he have a seal. In addition to such affidavit, the board shall hear such information as in its discretion it may deem proper as to any of the matters embraced in said affidavits. If it should appear from the evidence that said affidavit is untrue in any particular, or if it should appear that the applicant is not of good moral character, the application must be rejected; Provided, that osteopaths and

chiropractors shall be subject to the above regulations, with the exception that instead of the diploma hereinbefore mentioned they shall be required to file a diploma from a legally chartered college of estopathy or chiropractic (as the case may be) in good repute as such having a course of instruction, requiring actual attendance thereon, of three years of nine months each. In addition to the requirements above set out, such applicant for a certificate, upon the payment of a fee of fifteen dollars to the Secretary of the State Board of Medical Examiners, must be personally examined by said board as to his qualifications to practice medicine and surgery. The examination must be conducted in the English language, and shall be wholly or in part in writing, and shall be on the following branches to-wit, which branches shall be considered fundamental: Anatomy histology, physiology, chemistry, physical diagnosis, bacteriology, pathology, medical jurisprudence, toxicology surgery, gynecology, and obstetrics, the branches peculiar to the teachings of the school attended by the applicant, and such other additional subjects made necessary by the advance in medical education as the board may designate or deem advisable to test the scientific and practical knowledge of the applicant; Provided, that the applicant shall be examined in theory and practice, materia medica and therapeutics by those members of the board of examiners who represent the school of practice to which the applicant professes to belong; and Provided further, that those legally qualified to practice medicine only in the school known as osteopathy and chiropractic (as the case may be) shall not be permitted to administer medicines internally in the treatment of diseases except in the use of anesthetics in the practice of surgery and obstetrics, and in case of emergency. The credentials of applicants, which shall be sworn to by the applicants, relating to their general reputation, their preliminary education and the courses of studies that they have pursued; the degrees they have received; the number of years they have been engaged in the lawful practice of medicine; their experience in general hospitals, the medical department of the army and navy and public health and marine and hospital service, licenses granted to them by other states and countries, and their experience as teachers of medicine shall be given consideration by the board in conduction of its examination; Provided, that nothing herein contained shall be so construed as to prevent midwives from practicing in cases of emergency; and Provided, further, that those who use only herbs and roots and treat diseases with compensation shall not be required to register; Provided, however, that all physicians who have lawfully registered since statehood, shall not be required to re-register. McALISTER.

Vote was taken and the amendment carried by the following roll call vote:

Yeas: Austin, Beauman, Beeman, Blassingame, Board, Buckner, Carpenter, Davidson (of Tulsa), Davidson (of Muskogee), Edmonson, Fields, Franklin, Hickman, Keller, Logan, McAlister, McIntosh, McMechan, Risen, Ryan, Shaw, Sutherlin, Thomas, Waters. Total, 24.

Nays: Barrett, Bickel, Burford, Chase (of Nowata), Cline, Cordell, Curran, Davis, Edwards, Hogan, Killam, Mitchell, O'Neill, Pugh, Russell, Tucker, Watrous, Wilson (of Canadian). Total, 18.

Excused: Chase (of Seminole), Wilson (of Dewey).

Absent, 0.

Senator Davis offered the following amendment, which was adopted:

"Mr. President: I move to amend House Bill No. 252, by adding the following at the end of Section 1:

Provided that this act shall not be construed to prohibit the practice of healing the sick or afflicted by spiritual means or ministrations either gratuitously or for compensation according to the tenets and rules of the Christian Science Church. DAVIS.

Senator Shaw moved that House Bill No. 252 be advanced to engrossment and third reading.

Senator Pugh moved that House Bill No. 252 be indefinitely postponed, and on that motion the roll was called with the following results:

Yeas: Bickel, Chase (of Nowata), Cline, Cordell, Curran, Edwards, Killam, Mitchell, O'Neill, Pugh, Watrous. Total, 11.

Nays: Austin, Barrett, Beaman, Blassingame, Board, Buckner, Burford, Carpenter, Davidson (of Tulsa), Davidson (of Muskogee), Davis, Edmonson, Fields, Franklin, Hickman, Hogan, Keller, Logan, McAlister, McIntosh, McMechan, Risen, Russell, Ryan, Shaw, Sutherlin, Thomas, Tucker, Waters, Wilson (of Canadian). Total, 31.

Excused: Chase (of Seminole), Wilson (of Dewey). Total, 2.

Absent: 0.

The Chair declared the motion lost.

The vote recurring on the motion of Senator Shaw to advance to engrossment and third reading.

Vote was taken and the motion carried.

On motion of Senator McAlister the rules were suspended and House Bill No. 252 was considered engrossed, placed on third reading and final passage.

House Bill No. 252, as amended, by Lemon and Simpson.—An Act to regulate the practice of Chiropractics to create a Chiropractic Board and provide for the appointment of the same, etc., was read for the third time at length.

The question being, "Shall the bill pass?" the roll was called as follows:

Yeas: Barrett, Beaman, Beeman, Blassingame, Board, Buckner, Burford, Carpenter, Cordell, Curran, Davidson (of Tulsa), Davidson (of Muskogee), Davis, Edmonson, Fields, Franklin, Hickman, Hogan, Keller, Killam, Logan, McAlister, McIntosh, McMechan, Mitchell, Pugh, Risen, Ryan, Shaw, Sutherlin, Thomas, Waters, Wilson (of Canadian). Total, 33.

Nays: Bickel, Chase (of Nowata), Cline, Edwards, O'Neill, Tucker, Watrous. Total, 7.

Excused: Austin, Chase (of Seminole), Russell, Wilson (of Dewey). Total, 4.

Absent: 0.

The bill, having received a constitutional majority of the votes of all members elected to and constituting the Senate, was declared passed.

The question being, "Shall the bill be an emergency measure?" the roll was called as follows:

Yeas: Barrett, Beaman, Beeman, Blassingame, Board, Buckner, Burford, Carpenter, Cordell, Curran, Davidson (of Tulsa), Davidson (of Muskogee), Davis, Edmonson, Fields, Franklin, Hickman, Hogan, Keller, Killam, Logan, McAlister, McIntosh, McMechan, Mitchell, Pugh, Risen, Ryan, Shaw, Sutherlin, Thomas, Waters, Wilson (of Canadian). Total, 33.

Nays: Bickel, Chase (of Nowata), Cline, Edwards, O'Neill, Tucker, Watrous. Total, 7.

Excused: Austin, Chase (of Seminole), Russell, Wilson (of Dewey). Total, 4.

Absent: None.

The emergency, having received a two-thirds majority of the votes of all members elected to and constituting the Senate, was declared passed.

The President signed engrossed House Bill No. 252 in open session and ordered same transmitted to the Honorable House.

Senator Shaw moved that the vote by which House Bill No. 252 passed be reconsidered and that the motion lie on the table.

Vote was taken and the motion carried.

I am sorry to report that I have lost the house bill and at the time of the preparation of this report it is too late to secure another copy. It is a matter of house record and the vote of any member may be secured at any time that you may want to investigate how your representative voted.

W. T. SALMON,
Secretary Legislative Committee.

Conservation of Vision.

As Chairman of the Committee on Conservation of Vision for Oklahoma, I beg to submit the following report of lectures given during the past year. Owing to other demands, I have not been able to give as much time to this as I wanted to, but for the coming year I have the promise of assistance from some other oculists and feel that the work will be more satisfactory.

While it is not possible to give figures on the results of these lectures, it is likely that they will be productive of systematic inspection of school children in several communities.

Towns visited.	Estimated attendance.
Sayre	400
Elk City	400
Watonga	250
Ada	200
Cleveland	100
Clinton	250
Wagoner	200

Very truly yours,
EDW. F. DAVIS.

Thanks Members of Senate.

The Resolution Committee offered the following resolution:

Whereas, The State Senate of Oklahoma exhibited sound judgment and showed they had the best interests of the people at heart by refusing to legalize the practice of Chiropractic.

Be It Resolved, That the Oklahoma State Medical Association hereby expresses its satisfaction and extends its thanks to the members of the Senate.

A. D. YOUNG,
F. H. CLARK,
Committee.

Reports of Committee on Cancer and report of Secretary-Treasurer-Editor will appear in July issue on account of limited space in this issue.

C A. THOMPSON,
Secretary-Treasurer-Editor.



REPORT OF EXAMINATION HELD APRIL 13-15, 1915, AT OKLAHOMA CITY BY THE OKLAHOMA STATE BOARD OF MEDICAL EXAMINERS.

Licensed by Examination.

Orange Walter Starr....	St. Louis University, 1914.....	.77%,	Claremore.
George B. Coker.....	Memphis Hosp. M. C., 1911.....	.72%,	Waurika.
Arthur T. Martin.....	Meharry Med. Col., 1914.....	.74%,	Memphis, Tenn.
Lon. M. Tillman.....	Meharry Med. Col., 1914.....	.82%,	Kansas City, Mo.
Myrtle Minna Brill....	Indiana University, 1914.....	.84%,	Shawnee.
Daniel A. Chapman....	Baltimore Col. P. & S., 1907.....	.78%,	Sapulpa.
Bruce W. Baker.....	University of Louisville, 1914.....	.71%,	El Reno.
Wm. Griffith Berryhill..	Baltimore Med. Col., 1895.....	.71%,	Cushing.
Harry Forsythe Stapp..	Baltimore Med. Col., 1904.....	.73%,	Womelsdorf, Pa.

Rejected.

Vanderbilt University, 1893	58
University of Arkansas, 1912.....	66
Meharry Medical College, 1914	46

Licensed by Reciprocity.

James R. Best.....	Univ. Louisville, 1911.....	Ky.	Louisville, Ky.
Erich A. Hermsmeier....	Memphis Hosp. M. C., 1911.....	Tenn.	Memphis, Tenn.
William Hutchinson	Denver Gross C. M., 1904.....	N. M.	Gibson, N. M.
John Overton	Vanderbilt, 1905.....	Tenn.	Nashville, Tenn.
Wm. P. Rudell.....	Ark. Col. P. & S., 1911.....	Ark.	Hackett, Ark.
Frederick H. Butin....	Am. School Osteo., 1911.....	Mo.	Enid.
Ephriam R. Barker....	Eclectic Univ. K. C., 1906.....	Ark.	Center Hill, Ark.
Oliver F. Harper.....	Atlanta S. of Med., 1911.....	Ga.	Hinton, Okla.
Warner Herington	Marion Simms Beaumont, 1903...	Mo.	Green City, Mo.
Raymond H. Munford...	Washburn Med. Col., 1907.....	Kas.	Hanover, Kan.
Jas. LaSalle Miner.....	Univ. of Vermont, 1905.....	Vt.	Bigheart.
Clarence E. Ressler....	Hahnemann, Chicago, 1896.....	Kas.	Anthony, Kas.
Amin Boutros	St. Louis Univ., 1914.....	Mo.	St. Louis, Mo.
Alvin Benton Caldwell..	Memphis Hosp. M. C., 1911.....	Ark.	Caldwell, Ark.
Versile M. Gates.....	Detroit Col. of Med., 1910.....	Mich.	Cushing, Okla.
Ira Smith	Univ. of Ark., 1907.....	Ark.	Pryor.
Joseph T. Edwards....	Ill. Med. Col., 1902.....	Mich.	Chicago, Ill.
Helen E. Rice.....	Am. School Osteo., 1915.....	Mo.	Oklahoma City.
Chas. LeRoy Brock.....	Geo. Washington U., 1911.....	Md.	Jemes, N. M.

Licensed by Re-registration.

A. L. Edgington,	Charles P. Chambers,	John S. French,
J. T. King,	Albert Allen,	G. P. Cherry.
A. H. Collins,	A. T. Dobson,	

A license of re-instatement was issued to Dr. John P. Norvall, his license having been revoked by a former Board.

The next meeting of this Board will be held in Oklahoma City, July 13-15, 1915.

NEW APPOINTMENTS OF COUNTY HEALTH OFFICERS.

Adair.....	Dr. J. A. Patton, Stilwell	Logan.....	Dr. C. S. Petty, Guthrie
Atoka.....	Dr. J. S. Fulton, Atoka	Love.....	Dr. V. V. Batson, Marietta
Beckham....	Dr. W. W. McDonald, Sayre	McClain....	Dr. T. C. McCurdy, Purcell
Blaine.....	Dr. J. S. Sanders, Watonga	McCurtain..	Dr. R. D. Williams, Idabel
Bryan.....	Dr. J. L. Shuler, Durant	McIntosh...	Dr. W. A. Tollson, Eufaula
Caddo.....	Dr. R. D. Brown, Apache	Marshall....	Dr. T. A. Blaylock, Madill
Canadian...	Dr. G. W. Taylor, El Reno	Mayes.....	Dr. Carl Puckett, Pryor
Carter.....	Dr. Walter Hardy, Ardmore	Muskogee	
Choctaw....	Dr. G. E. Harris, Hugo	Dr. C. A. Thompson, Muskogee
Cleveland...	Dr. C. S. Bobo, Norman	Noble.....	Dr. Bruce Watson, Perry
Comanche...	Dr. E. C. Gooch, Lawton	Okfuskee...	Dr. C. M. Bloss, Okemah
Cotton....	Dr. Howard McKinney, Temple	Ottawa....	Dr. G. P. McNaughton, Miami
Dewey.....	Dr. V. M. Gore, Taloga	Pawnee....	Dr. Roy Waggoner, Pawnee
Garfield...	Dr. L. W. Cotton, Enid	Pontotoc...	Dr. Katherine Threlkeld, Ada
Garvin....	Dr. H. P. Wilson, Wynnewood	Pottawatomie..	Dr. J. H. Scott, Shawnee
Harper.....	Dr. D. M. Miller, Buffalo	Pushmataha..	Dr. H. C. Johnson, Antlers
Jackson....	Dr. S. P. Rawls, Altus	Seminole...	Dr. M. Turlington, Seminole
Jefferson...	Dr. Roscoe Dixon, Sugden	Washita.....	Dr. Leverton, Cordell
LeFlore....	Dr. B. D. Woodson, LeFlore	Woods.....	Dr. G. N. Bilby, Alva

CORRESPONDENCE AND MISCELLANEOUS

Treasury Department, Internal Revenue Service,

Oklahoma City, Okla., May 22nd, 1915.

Dr. Claude Thompson,
Secretary Oklahoma State Medical Association,
Muskogee, Oklahoma.

Dear Sir: Replying to your favor of the 20th instant with reference to a statement from me as to the beginning of the next fiscal year and in regard to the requirements as to re-registration under the Federal Anti-narcotic law, I wish to make the following statement:

The next fiscal year begins on July 1st, 1915, and the registration fee under the above law is due on or before that date, but may be paid any time within the month of July without incurring the fifty percent penalty, from each and every person who produces, imports, manufactures, compounds, deals in, dispenses, sells, distributes, or gives away opium or coca leaves or any compound, manufacture, salt, derivative, or preparation thereof. The registration fee will be paid for one year from July 1st, 1915, the amount of which will be \$1.00. A blank application will be mailed from this office in due time to every person who is now registered under this law, but in case the applications are not received additional ones may be procured by application to this office. Remittances should be made by bank draft, money order or certified check; personal or firm checks cannot be accepted. The registry number now held by persons registered under this law will be retained by them from year to year.

With reference to druggists engaged in more than one business: A retailer having more than one place of business, or, if in any case, the retailer is engaged in more than one profession or business where any of the drugs coming within the scope of this law are made, stored, or dispensed, should make application for registration in each such case.

With reference to records to be kept by physicians: The words "dispensed, distributed, or prescribed," used in the law, are construed as synonymous, and a physician, dentist, or veterinary surgeon "dispenses" within the meaning of the law when he writes a prescription calling for any of the narcotic drugs to be filled by a registered dealer. A physician, dentist or veterinary surgeon shall keep a record of all such drugs dispensed or distributed (including prescriptions), showing the amount dispensed or distributed (or prescribed), the date, and the name and address of the patient to whom such drugs are dispensed or distributed (or prescribed), except such as may be dispensed or distributed to a patient upon whom such physician, dentist or veterinary surgeon shall personally attend. A physician, dentist or veterinary surgeon must actually be absent from his office and in personal attendance upon a patient in order to come within this exemption. A physician, dentist or veterinary surgeon shall keep a record of all such drugs dispensed or distributed to a patient in his office, or left by him to be administered by other persons to a patient; such record shall show the date, and the name and address of the patient and the kind and quantity of such drugs dispensed or distributed or left to be dispensed or distributed by other persons to a patient. A physician may keep a record of drugs dispensed, distributed or prescribed by using a record book or by keeping a copy of his prescriptions. A prescription by a physician, dentist or veterinary surgeon, for drugs coming within the scope of this law, shall show the name and address of the patient, the date on which issued and the full signature and registry number of such physician, dentist or veterinary surgeon.

A physician, dentist or veterinary surgeon cannot obtain drugs coming within the scope of this law, for his or her office use, upon prescription but must in all cases obtain same by using a regular blank order form which is issued by the Government.

Your query as to the prescription of large amounts of drugs coming within the scope of this law, in exceptional cases, is fully answered in a recent Treasury Decision, a copy of which is herewith enclosed for your information. This decision, I think, will serve to make the matter of prescribing these drugs clear to all physicians, dentists and veterinarians.

Any further information regarding this law that you may desire will be gladly furnished you.

Respectfully,

HUBERT L. BOLLEN, Collector.

The Narcotic Law does not limit or state the quantity of any of the narcotic drugs that may be so dispensed or prescribed at one time. It does provide that it shall be unlawful to obtain by means of order forms any of the aforesaid drugs for any purpose other than the use, sale or distribution thereof, in the "conduct of a lawful business in said drugs, or in the legitimate practice of his profession." Further, that all preparations and remedies containing narcotic drugs coming within the scope of this act are "sold, distributed, given away, dispensed or possessed as medicines and not for the purpose of evading the intentions and provisions of this act," and it is further provided that it shall be unlawful for any person not registered to have in his possession or under his control any of the drugs, preparations, or remedies "which have not been prescribed in good faith by a physician, dentist or veterinary surgeon registered under the act."

Therefore, where a physician, dentist or veterinarian prescribes any of the aforesaid drugs in a quantity more than is apparently necessary to meet the immediate needs of a patient in the ordinary case, or where it is for the treatment of an addict or habitue to effect a cure, or for a patient suffering from an incurable or chronic disease, such physician, dentist or veterinary surgeon shall indicate on the prescription the purpose for which the unusual quantity of the drug so prescribed is to be used. In cases of treatment of addicts, these prescriptions should show the good faith of the physician in the legitimate practice of his profession by a decreasing dosage or reduction of the quantity from time to time, while, on the other hand, in cases of chronic or incurable diseases, such prescriptions might show an ascending dosage or increased quantity. Registered dealers filling such prescriptions should assure themselves that the drugs are prescribed in good faith for the purpose indicated thereon and if there is reason to suspect that the prescriptions are written for the purpose of evading the intentions of the law such dealers should refuse to fill same.

SAN FRANCISCO MEETING.

I have received a number of letters of inquiry from physicians who will attend the forthcoming meeting of the American Medical Association. They have asked about transportation, Pullman rates, hotel accommodations, side trips, etc. I submit herewith three special plans which are being patronized, viz: (1) The Gregory Tours, (2) The McCann Tours, (3) The Pennsylvania Railroad Tours. There may be others, but these are the only ones of which I have knowledge.

The Chicago Medical Society is accepting the services of the Gregory Tours. It leaves Chicago June 17th, via Chicago & Rock Island R. R. to Colorado Springs, and from there over the "Scenic Route", arriving at San Francisco June 21st. The return route may be made over any road you desire. The Gregory Tours will route you over other roads if you prefer. The plan of the Chicago Medical Society is as follows:

First-class railroad ticket to San Francisco, Los Angeles, San Diego and return. Railroad tickets good for 90 days. Pullman standard sleeper to San Francisco, giving an entire section to two persons. If two persons occupy one berth there is a reduction of \$10.00 on the two tours. Transfer of member and checked baggage to and from hotel at San Francisco. Seven consecutive days at the Hotel Plaza or Bellevue in San Francisco, (only two in double room, including seven breakfasts). Seventy-five percent of rooms with private bath, those making first reservations having first choice. Seven admissions to Panama-Pacific International Exposition. Admission to twenty attractions with the Exposition grounds. "Trip to Chinatown" with guide escort. Steamer trip (4 hours) San Francisco Bay, viewing the Golden Gate and Exposition grounds. Key Trolley Trip (7 hours) through Oakland, Alameda and Berkeley, visiting the University of California, famous Greek Theatre and Idora Park. Trip to Mt. Tamalpais (8 hours) on the "crookedest railroad in the world".

The total expense of this tour as outlined is as follows: Tour "A," Plaza, Chicago, \$141.00; or Bellvue Hotels, St. Louis, \$135.00; \$17.50 extra railroad fare to return via Northern Route.

Those who buy their own railroad ticket and want accommodations at San Francisco, June 21-28, including all features as outlined above, the price will be \$65.50. Rates from different railroad points will be furnished on request.

Each reservation must be accompanied by a deposit of \$10.00 and \$10.00 additional in thirty days, same to be retained by the Gregory Tours as "reservation rights" payments. Balance to be paid thirty days before departure.

Make all checks payable to Gregory Tours Co., Lytton Bldg., Chicago, sending same to Dr. R. R. Ferguson, 3923 No. Keeler Ave., Chicago, who has charge of reservations.

TOUR SYSTEM OF THE PENNSYLVANIA RAILROAD.

This Tour System is being operated in the interest of the Pan-American Medical Congress, which meets in San Francisco June 17-21; also the American Medical Association meeting, which follows immediately thereafter. The following is an announcement which I received:

Cost of Trip.

The fares given below cover round-trip to San Francisco, going on special train as indicated and returning via direct routes; Pullman accommodations (one double berth) from starting point to San Francisco. All meals in dining car will be on the a la carte basis and will be at individual expense.

New York, N. Y., \$128.40; Philadelphia, Pa., \$123.30; Baltimore, Md., \$116.05; Washington, D. C., \$116.05; Harrisburg, Pa., \$113.65; East Liberty, Pa., \$102.55. Proportionate rate from other points.

Extra Charge for Drawing-Rooms and Compartments.

Over and above regular Pullman berth charge. One person in drawing-room, \$45.00; Two persons in drawing-room (each), \$13.50; Three persons in drawing-room (each), \$3.00; one person in compartment, \$32.50; two persons in compartment (each), \$7.25; one person occupying whole section, \$14.40.

Two railroad tickets will be required for the exclusive use of a drawing-room, and one and one-half tickets for the exclusive use of a compartment.

For additional information and booking on either the "Pan-American Medical Congress Special" or the "American Medical Association Special", application should be made to Dr. H. L. E. Johnson, Chairman Transportation Committee, Pan-American Medical Congress, 1821 Jefferson Place, Northwest, Washington, D. C.

McCANN TOURS.

The following is from the Journal of the American Medical Association:

New York and New England Special.

This train will be under the management of McCann's Tours. The itinerary is planned to provide a fast schedule over an interesting route for the outward trip, leaving eastern points as late as the afternoon and evening of June 16, and getting to San Francisco on Sunday evening, June 20. The return trip will be made in a leisurely manner over an interesting scenic route, including a trip from San Francisco to Portland by way of the Shasta line. Stops will be made at Portland, Seattle and Spokane, and a five-day trip through the Glacier National Park is planned. The itinerary, as has been noted, contemplates leaving New York at 2 p. m., June 16, over the New York Central lines, thence by way of the Chicago, Milwaukee & St. Paul, the Union Pacific and Southern Pacific to San Francisco, where the party will stop from Monday, June 21, to Friday, the 25th, leaving San Francisco at 8 p. m. on the last named day. From Wednesday, June 30, to Sunday, July 4, the party will be in Glacier National Park, returning to New York on Thursday, July 8.

Those who do not find time or are not disposed to return by the route indicated, may arrange to take the special train to San Francisco and to return within three months after the date of starting, by an authorized route selected.

I suggest that you make your reservations now, if you have not already done so.

J. RAWSON PENNINGTON, M. D.,
Chairman, Committee on Transportation
and Place of Session.

MOVING PICTURES IN RURAL SCHOOLS.

Psychologists say that 87% of all we learn comes through the eye. This fact is being utilized in many cities and in some states by a department of "Visual Instruction." Oklahoma is the first state to attempt its introduction into rural schools. The Extension Bureau of the University will offer the following Visual Instruction service for six months of next year,—October to March:

Typewritten lectures will be sent to each school subscribing for the service, which are to be memorized by the teacher or some one appointed by him. Once each month a set of stereopticon slides is sent illustrating one of the lectures which is to be delivered as the slides are shown. Following this will be about 20 minutes of the finest moving pictures.

The University Extension will also employ several fine music instructors who will be sent to any community desiring them. For full particulars concerning this work, address,

J. W. SCROGGS,
Director, University Extension,
Norman, Oklahoma.

ROSTER OF MEMBERS OF THE OKLAHOMA STATE MEDICAL ASSOCIATION.

(Corrected to May 20, 1915.)

ADAIR COUNTY.

Dr. D. A. Beard.....	Westville	Dr. J. A. Robinson..	Dutch Mills, Ark.
Dr. B. F. Collins.....	Stilwell	Dr. C. M. Robinson.....	Stilwell
Dr. W. G. Dickey.....	Westville	Dr. A. J. Sands.....	Watts
Dr. J. N. Lane.....	Westville	Dr. R. L. Sellers.....	Westville
Dr. J. A. Patton.....	Stilwell	Dr. T. S. Williams.....	Stilwell

ALFALFA COUNTY.

Dr. H. B. Ames.....	Burlington	Dr. W. G. Kiebler.....	Goltry
Dr. R. E. Bartlett.....	Carmen	Dr. L. T. Lancaster.....	Cherokee
Dr. J. T. Bird.....	Ingersol	Dr. H. A. Lile.....	Aline
Dr. Z. J. Clark.....	Cherokee	Dr. E. J. Reichley.....	Helena
Dr. S. B. Growden.....	Cherokee	Dr. T. A. Rhodes.....	Goltry
Dr. J. S. Hibbard.....	Cherokee	Dr. C. M. Smith.....	Cherokee

ATOKA COUNTY.

Dr. T. H. Briggs.....	Atoka	Dr. M. Pinson.....	Atoka
Dr. C. H. Field.....	Caney	Dr. E. A. Rowley.....	Atoka
Dr. J. S. Fulton.....	Atoka	*Dr. J. W. Rollins.....	Atoka
Dr. C. C. Gardner.....	Atoka		

BECKHAM COUNTY.

Dr. J. M. Denby.....	Carter	Dr. T. D. Palmer.....	Elk City
Dr. A. A. Huntley.....	Sweet Water	Dr. H. K. Speed.....	Sayre
Dr. T. E. Johnson.....	Elk City	Dr. C. W. Tedrowe.....	Elk City
Dr. I. A. Lee.....	Erick	Dr. V. C. Tisdell.....	Elk City
Dr. M. H. Levi.....	Elk City	Dr. J. D. Warford.....	Erick
Dr. J. M. McComas.....	Elk City	Dr. O. N. Windle.....	Sayre
Dr. R. C. McCreery.....	Erick	Dr. J. E. Yarbrough.....	Erick
Dr. W. W. McDonald.....	Sayre		

BLAINE COUNTY.

*Dr. H. H. Blender.....	Okeene	W. R. Kelly.....	Watonga
Dr. J. W. Browning.....	Geary	*Dr. J. B. Leisure.....	Watonga
*Dr. J. S. Barnett.....	Hitchcock	Dr. S. H. Murdock.....	Okeene
Dr. M. W. Buchanan.....	Watonga	Dr. A. F. Padberg.....	Canton
Dr. H. W. Doty.....	Homestead	Dr. D. F. Stough.....	Geary
Dr. C. A. Freeman.....	Geary	*Dr. J. Sanders.....	
G. T. Green.....	Drumwright	*Dr. S. G. Wishard.....	Watonga

BRYAN COUNTY.

*Dr. J. L. Austin.....	Durant	Dr. D. C. McCalib.....	Utica
Dr. J. R. Allen.....	Caddo	Dr. W. H. McCarley.....	Colbert
Dr. D. Armstrong.....	Mead	Dr. C. S. Mullenix.....	Roberta
Dr. W. R. Bowman.....	Caddo	Dr. H. E. Rappolee.....	Caddo
Dr. P. L. Cain.....	Albany	Dr. J. L. Reynolds.....	Durant
Dr. R. E. Dickey.....	Kenefick	Dr. G. M. Rushing.....	Durant
Dr. C. G. Fisher.....	Bokchito	Dr. Jas. L. Shuler.....	Durant
Dr. H. B. Fuston.....	Blue	Dr. J. B. Smith.....	Durant
Dr. R. H. Grassham.....	Caddo	Dr. J. C. Terrell.....	Durant
Dr. A. S. Hagood.....	Durant	Dr. A. J. Wells.....	Calera
Dr. J. H. Kay.....	Durant	Dr. H. W. Yeats.....	Durant
Dr. J. R. Keller.....	Calera	Dr. C. C. Yeiser.....	Colbert
Dr. C. C. Lively.....	Colbert		

CADDO COUNTY.

Dr. P. H. Anderson.....	Anadarko	Dr. Geo. C. Campbell.....	Anadarko
Dr. J. H. Beucler.....	Apache	Dr. Geo. B. Colby.....	Gracemont
Dr. Jesse Bird.....	Cement	Dr. F. Dinkler.....	Fort Cobb
Dr. S. Blair.....	Apache	Dr. Edward W. Downs.....	Hinton
Dr. W. E. Booth.....	Sickles	Dr. M. H. Edens.....	Verden
Dr. B. D. Brown.....	Apache	Dr. O. F. Harper.....	Hinton

*Not reported April 30, 1915.

CADDO COUNTY (Continued).

Dr. W. T. Hawn.....	Binger	Dr. Claude E. Putnam.....	Eakley
Dr. J. J. Henke.....	Hydro	Dr. Wm. B. Putnam.....	Alfalfa
Dr. Chas. R. Hume.....	Anadarko	Dr. R. D. Rector.....	Anadarko
Dr. J. G. Janney.....	Anadarko	Dr. F. W. Rogers.....	Carnegie
Dr. R. E. Johnston.....	Bridgeport	Dr. P. L. Sanders.....	Carnegie
Dr. W. W. Kerley.....	Anadarko	*Dr. R. Earle Smith.....	Gracemont
Dr. C. W. Lane.....	Omak, Wash.	Dr. A. H. Taylor.....	Anadarko
Dr. P. L. McClure.....	Fort Cobb	Dr. Vann Wade.....	Cement
Dr. O. D. McCray.....	Binger	Dr. D. D. Weiser.....	Apache
Dr. Geo. M. McVey.....	Cyril	Dr. S. E. Williams.....	Hydro
Dr. P. B. Myers.....	Lookeba	Dr. R. W. Williams.....	Anadarko
Dr. J. W. Padberg.....	Carnegie	Dr. A. J. Willard.....	Cyril

CANADIAN COUNTY.

Dr. W. M. Aderhold.....	El Reno	Dr. W. R. Miller.....	Calumet
Dr. C. D. Arnold.....	El Reno	Dr. W. J. Muzzy.....	El Reno
Dr. H. C. Brown.....	Okarche	Dr. D. P. Richardson.....	Union City
Dr. W. B. Catto.....	El Reno	Dr. Jas. T. Riley.....	El Reno
Dr. E. H. Clark.....	El Reno	Dr. N. E. Ruhl.....	Piedmont
Dr. J. A. Hatchett.....	El Reno	Dr. R. E. Runkle.....	El Reno
Dr. R. F. Koons.....	El Reno	Dr. S. S. Sanger.....	Yukon
Dr. Thos. Lane.....	El Reno	Dr. G. W. Taylor.....	El Reno
Dr. L. W. Lynde.....	Okarche	Dr. L. G. Wolff.....	Okarche

CARTER COUNTY.

Dr. G. W. Amerson.....	Milo	Dr. G. E. Goodwin.....	Ardmore
Dr. A. E. Ballard.....	Lone Grove	Dr. Walter Hardy.....	Ardmore
Dr. J. T. Barnwell.....	Graham	Wr. W. G. Hathaway.....	Pooleville
Dr. J. C. Best.....	Ardmore	Dr. Robt. H. Henry.....	Ardmore
Dr. F. W. Boadway.....	Ardmore	Dr. H. A. Higgins.....	Springer
Dr. T. S. Booth.....	Ardmore	Dr. J. G. McNees.....	Ardmore
Dr. J. E. Booth.....	Mill Creek	Dr. J. H. Smith.....	Healdton
Dr. D. E. Cantrell.....	New Wilson	Dr. Dow Taylor.....	Woodford
Dr. J. L. Cox.....	Ardmore	Dr. F. P. Von Keller.....	Ardmore
Dr. T. W. Denham.....	Provence	Dr. J. W. Webb.....	Berwyn
Dr. Thos. W. Dowdy.....	New Wilson	Dr. R. S. Willard.....	Brock
Dr. L. D. Gillespie.....	Springer		

CHEROKEE COUNTY.

Dr. J. S. Allison.....	Tahlequah	Dr. H. B. Fite.....	Tahlequah
Dr. T. P. Allison.....	Tahlequah	Dr. Israel Hill.....	Tahlequah
Dr. A. A. Baird.....	Park Hill	Dr. J. J. Johnson.....	Woody
Dr. W. G. Blake.....	Tahlequah	Dr. R. L. Murray.....	Welling
Dr. T. J. Bond.....	Hulbert	*Dr. L. R. Manning.....	Cookson
Dr. W. L. Brown.....	Hulbert	Dr. C. A. Peterson.....	Tahlequah
Dr. J. F. Duckworth.....	Tahlequah	Dr. J. M. Thompson.....	Tahlequah

CHOCTAW COUNTY.

Dr. E. R. Askew.....	Hugo	Dr. W. N. John.....	Hugo
Dr. T. L. Chambliss.....	Hugo	Dr. John Lawson.....	Clayton
Dr. G. M. Davis.....	Boswell	Dr. G. O. Marsh.....	Ft. Towson
Dr. Robt. H. Faught.....	Ft. Towson	Dr. J. D. Moore.....	Sawyer
Dr. Perry Fling.....	Hugo	Dr. E. S. Patterson.....	Antlers
Dr. C. N. Frazier.....	Hugo	Dr. R. J. Shull.....	Hugo
Dr. R. L. Gee.....	Hugo	Dr. C. H. Swearingen.....	Hugo
Dr. I. L. Gentry.....	Boswell	Dr. I. D. Walker.....	Antlers
Dr. W. M. Griffith.....	Grant	Dr. H. H. White.....	Hugo
Dr. C. H. Hale.....	Boswell	Dr. P. E. Wright.....	Albion
Dr. G. E. Harris.....	Hugo	Dr. W. M. Yeargan.....	Soper

COAL COUNTY.

Dr. Frank Bates.....	Coalgate	Dr. J. J. Hipes.....	Phillips
Dr. W. E. Brown.....	Lehigh	Dr. W. A. Logan.....	Lehigh
Dr. A. Cates.....	Tupelo	Dr. F. E. Rushing.....	Coalgate
Dr. J. B. Clark.....	Coalgate	Dr. F. E. Sadler.....	Coalgate
Dr. L. A. Connor.....	Coalgate	Dr. W. B. Wallace.....	Coalgate
Dr. W. B. Goben.....	Lehigh	Dr. H. F. Wolford.....	Coalgate

CLEVELAND COUNTY.

Dr. G. S. Bobo.....	Norman
Dr. W. L. Capshaw.....	Norman
Dr. G. M. Clifton.....	Norman
Dr. J. W. Davis.....	Norman
Dr. J. L. Day.....	Norman
Dr. Gayfree Ellison.....	Norman
Dr. D. W. Griffin.....	Norman
Dr. A. C. Hirshfield.....	New York City

Dr. J. B. Lambert.....	Lexington
*Dr. R. O. Lowther.....	Norman
Dr. Carl Stien.....	Norman
Dr. Robt. E. Lee Thacker....	Lexington
Dr. A. A. Thurlow.....	Norman
Dr. John P. Torrey.....	Norman
Dr. T. J. Wells.....	Davis

COMANCHE COUNTY.

Dr. Jerry Ashley.....	Fletcher
Dr. G. S. Barber.....	Lawton
Dr. Jackson Brashears.....	Lawton
Dr. F. R. Dolson.....	Faxon
Dr. H. V. Dresback.....	Geronimo
Dr. E. B. Dunlap.....	Lawton
Dr. J. F. Gamble.....	Elgin
Dr. E. S. Gooch.....	Lawton
Dr. L. T. Gooch.....	Lawton
Dr. F. W. Hammond.....	Lawton
Dr. W. B. Harned.....	Chattanooga
Dr. L. H. Hilsmeier.....	Elgin
Dr. Walter N. Hitch.....	Sterling
Dr. J. R. Hood.....	Indianapolis

Dr. G. P. Hues.....	Lawton
Dr. J. C. Johnston.....	Lawton
Dr. George E. Kerr.....	Chattanooga
Dr. L. C. Knee.....	Lawton
Dr. J. W. Malcolm.....	Lawton
Dr. W. B. Mead.....	Lawton
Dr. E. D. Meeker.....	Lawton
Dr. L. A. Milne.....	Lawton
Dr. E. Brent Mitchell.....	Lawton
Dr. D. A. Myers.....	Lawton
Dr. J. Allen Perisho.....	Cache
Dr. Ferdinand Shoemaker.....	Chemawa, Oregon

COTTON COUNTY.

Dr. M. T. Clark.....	Temple
Dr. R. J. Dice.....	Randlett
Dr. L. B. Foster.....	Walters
Dr. T. Fuller.....	Amber
Dr. C. F. House.....	Hastings

Dr. M. A. Jones.....Walters
Dr. G. M. Jones.....Walters
Dr. Chas. McCallum.....Randlett
Dr. Howard McKinney.....Temple
Dr. M. J. Sanders.....Devol

CRAIG COUNTY.

Dr. F. M. Adams.....	Vinita
Dr. Louis Bagby.....	Vinita
Dr. J. W. Craig.....	Vinita
Dr. E. P. Davis.....	Welch
Dr. B. L. Elam.....	Centralia
Dr. B. F. Fortner.....	Vinita
Dr. A. W. Herron.....	Vinita
Dr. F. L. Hughson.....	Vinita
Dr. W. W. Jackson.....	Vinita

Dr. W. R. Marks.....	Vinita
Dr. R. L. Mitchell.....	Vinita
Dr. C. S. Neer.....	Vinita
Dr. J. L. Robinson.....	Bluejacket
Dr. W. F. Snodgrass.....	Centralia
Dr. D. B. Stodgh.....	Vinita
Dr. J. H. L. Staples.....	Bluejacket
Dr. J. B. Wharton.....	Ketchum
Dr. Frank Woolard.....	Welch

CREEK COUNTY.

Dr. A. Avery.....	Sapulpa
Dr. J. W. Bone.....	Sapulpa
Dr. D. W. Conger.....	Mounds
Dr. A. H. Crouch.....	Mounds
Dr. G. C. Croston.....	Sapulpa
Dr. M. Fry.....	Drumwright
Dr. H. S. Garland.....	Sapulpa
Dr. I. E. Gladden.....	Kiefer
Dr. Harry R. Haas.....	Sapulpa
Dr. Ben C. Harris.....	Sapulpa
Dr. Ellis Jones.....	Kiefer
Dr. H. B. Justice.....	Sapulpa
Dr. Matthew Karasek....	Drumwright

Dr. E. W. King.....	Bristow
Dr. W. P. Longmire.....	Sapulpa
Dr. C. M. McCallum.....	Sapulpa
Dr. E. W. Reynolds.....	Bristow
Dr. Chas. T. C. Schrader.....	Bristow
Dr. B. C. Schwab.....	Sapulpa
Dr. J. W. St. Sing.....	Kelleyville
Dr. R. M. Sweeney.....	Sapulpa
Dr. Z. G. Taylor.....	Mounds
Dr. J. M. Wells.....	Bristow
Dr. Geo. H. Wetzel.....	Sapulpa
Dr. F. R. Wheeler.....	Mannford
Dr. G. A. Stafford.....	Keifer

CUSTER COUNTY.

Dr. W. D. Bolton.....	Clinton
Dr. T. R. Buchanan.....	Thomas
Dr. J. T. Butler.....	Weatherford
Dr. N. C. Comer.....	Arapahoe
Dr. S. C. Davis.....	Weatherford
Dr. T. E. Evans.....	Butler
Dr. J. Matt Gordon.....	Weatherford
Dr. K. D. Gossom.....	Custer
Dr. T. B. Hinson.....	Thomas
Dr. Ellis Lamb.....	Clinton

Dr. H. M. Marshall.....	Butler
Dr. C. H. McBurney.....	Clinton
Dr. P. G. Murray.....	Thomas
Dr. O. H. Parker.....	Custer City
Dr. W. W. Parker.....	Custer City
Dr. L. L. Patterson.....	Arapahoe
Dr. McLain Rogers.....	Clinton
Dr. W. B. Tilton.....	Clinton
Dr. N. P. H. White.....	Clinton
Dr. J. J. Williams.....	Weatherford

DEWEY COUNTY.

Dr. B. H. Burnett.....	Hulen	*Dr. W. E. Seba.....	Leedy
Dr. V. W. Gore.....	Taloga	*Dr. O. M. Wright.....	Putnam
Dr. E. J. Hughes.....	Taloga		

GARFIELD COUNTY.

Dr. J. H. Barnes.....	Enid	Dr. W. E. Lamerton.....	Enid
Dr. G. A. Boyle.....	Enid	Dr. S. A. Looper.....	Garber
*Dr. R. A. Brown.....	Waukomis	Dr. E. A. Mayberry.....	Enid
Dr. B. T. Bitting.....	Enid	Dr. S. N. Mayberry.....	Enid
*Dr. J. M. Cooper.....	Enid	Dr. E. N. McKee.....	Enid
Dr. L. W. Cotton.....	Enid	Dr. A. M. McMahan.....	Hillsdale
Dr. F. P. Davis.....	Enid	Dr. W. B. Newell.....	Hunter
Dr. J. W. Francisco.....	Enid	Dr. C. E. Thompson.....	Enid
Dr. F. A. Hudson.....	Enid	*Dr. A. E. Wilkins.....	Covington
Dr. M. A. Kelso.....	Enid	Dr. E. J. Wolff.....	Waukomis
Dr. W. L. Kendall.....	Enid		

GARVIN COUNTY.

Dr. R. L. Baker.....	Wynnewood	Dr. Price Patterson.....	Maysville
Dr. T. C. Branum.....	Pauls Valley	Dr. B. W. Ralston.....	Lindsay
Dr. John Callaway.....	Mescalero, New M.	Dr. M. E. Robinson.....	Brady
Dr. J. R. Callaway.....	Pauls Valley	Dr. W. E. Settles.....	Wynnewood
Dr. John Darst.....	Wynnewood	Dr. J. B. Shannon.....	Pauls Valley
*Dr. W. C. High.....	Maysville	Dr. J. M. Shelton.....	Pauls Valley
Dr. G. L. Johnson.....	Pauls Valley	Dr. Andrew Struble.....	Pauls Valley
Dr. A. P. Keever.....	Lindsay	Dr. C. A. Sullivan.....	Elmore City
Dr. E. H. Lain.....	Paoli	Dr. Ernest Sullivan.....	Maysville
Dr. J. K. Lindsay.....	Elmore City	Dr. J. I. Taylor.....	Robberson
Dr. N. H. Lindsay.....	Pauls Valley	Dr. J. W. Tucker.....	Purdy
Dr. H. P. Markham.....	Pauls Valley	*Dr. W. M. Webster.....	Stratford
Dr. J. C. Matheney.....	Lindsay	Dr. S. W. Wilson.....	Lindsay
Dr. E. E. Norville.....	Wynnewood	Dr. H. P. Wilson.....	Wynnewood
Dr. C. M. Pratt.....	Maysville		

GRADY COUNTY.

Dr. H. C. Antle.....	Chickasha	Dr. A. E. Henning.....	Tuttle
Dr. Wm. R. Barry.....	Bradley	Dr. R. R. Hume.....	Ninco
Dr. R. J. Baze.....	Chickasha	Dr. F. W. Jones.....	Verden
Dr. Martha J. Bledsoe.....	Chickasha	Dr. A. B. Leeds.....	Chickasha
Dr. U. G. Boon.....	Chickasha	Dr. J. S. Little.....	Minco
Dr. W. H. Cook.....	Chickasha	Dr. W. H. Livermore.....	Chickasha
Dr. C. P. Cox.....	Ninnekah	Dr. S. O. Marrs.....	Chickasha
Dr. E. L. Dawson.....	Chickasha	Dr. C. G. Martin.....	Pocasset
Dr. D. S. Downey.....	Chickasha	Dr. W. Penquite.....	Chickasha
Dr. L. E. Emanuel.....	Chickasha	Dr. J. E. Stinson.....	Chickasha
Dr. H. M. Evans.....	Rush Springs	Dr. G. H. Thraikill.....	Chickasha
Dr. J. W. Finley.....	Rush Springs	Dr. R. P. Tye.....	Chickasha
Dr. G. R. Gerard.....	Ninnekah	Dr. A. C. White.....	Chickasha
Dr. R. J. Gordon.....	Ninnekah	Dr. L. H. Winborn.....	Tuttle
Dr. P. J. Hampton.....	Rush Springs		

GRANT COUNTY.

Dr. G. T. Drennan.....	Pond Creek	Dr. J. T. Martin.....	Deer Creek
Dr. W. P. Grimand.....	Renfrow	Dr. E. B. Miller.....	Wakita
Dr. A. L. Hamilton.....	Manchester	Dr. R. F. O'Rear.....	Jefferson
Dr. J. V. Hardy.....	Medford	Dr. D. O. Roberts.....	Nashville
Dr. W. E. Herrington.....	Wakita	Dr. B. W. Saffold.....	Gibbon
Dr. J. S. Hunt.....	Jefferson	Dr. H. A. Stalker.....	Pond Creek
Dr. S. A. Lively.....	Wakita	Dr. Wm. Stout.....	Jefferson
Dr. C. H. Lockwood.....	Medford	Dr. J. M. Watson.....	Lamont

GREER COUNTY.

Dr. G. F. Border.....	Mangum	Dr. W. O. Dodson.....	Willow
Dr. B. F. Carr.....	Mangum	Dr. W. H. Finley.....	Reed
Dr. S. P. Crerry.....	Mangum	Dr. R. L. Holt.....	Mangum
Dr. W. D. Dawson.....	Mangum	Dr. T. J. Horsly.....	Mangum
Dr. M. M. Dearman.....	Mangum	Dr. O. R. Jeter.....	Brinkman
Dr. W. J. Dodson.....	Mangum	Dr. J. B. Lansden.....	Granite

GREER COUNTY (Continued).

Dr. B. F. Moss.....	Willow	Dr. G. Pinnell.....	Mangum
Dr. Ney Neel.....	Mangum	Dr. E. M. Poer.....	Jester
Dr. T. J. Nunnery.....	Granite	Dr. G. M. Tracy.....	Mangum
Dr. L. E. Pearson.....	Reed	Dr. G. W. Wiley.....	Granite

HARMON COUNTY.

Dr. C. E. Collins.....	Gould, R. F. D.	Dr. J. B. Patrick.....	Vinson
Dr. S. W. Hopkins.....	Hollis	Dr. W. C. Pendergraft.....	Hollis
Dr. J. E. Jones.....	Hollis	Dr. W. T. Ray.....	Gould
Dr. E. J. Kilpatrick.....	Vinson	Dr. J. S. Scarbrough.....	Gould
Dr. H. Lindley.....	Hollis	Dr. O. J. Street.....	Gould
Dr. J. S. McFaddin.....	Hollis		

HASKELL COUNTY.

Dr. A. C. Bullard.....	Quinton	Dr. R. E. Jones.....	Lequire
Dr. A. B. Callaway.....	Stigler	Dr. B. T. McClure.....	McCurtain
Dr. J. Culbertson.....	Maud	Dr. S. E. Mitchell.....	Stigler
Dr. R. R. Culbertson.....	Hoyt	Dr. W. G. Ramsay.....	McCurtain
Dr. C. D. Dale.....	Keota	Dr. J. C. Rumley.....	Tamaha
Dr. John Davis.....	Stigler	Dr. H. J. Sims.....	Stigler
Dr. F. A. Fannin.....	Stigler	Dr. R. F. Terrell.....	Stigler
Dr. W. C. Gilliam.....	Quinton	Dr. T. B. Turner.....	Stigler
Dr. A. T. Hill.....	Tamaha	Dr. M. Van Matre.....	Keota
Dr. E. Johnson.....	Kinta	Dr. J. R. Waltrip.....	Kinta
Dr. O. H. Jones.....	Kanima		

HUGHES COUNTY.

Dr. D. Y. McCary.....	Calvin	Dr. J. P. Williams.....	Holdenville
*Dr. J. W. Lowe.....	Holdenville		

JACKSON COUNTY.

Dr. E. A. Abernathy.....	Altus	Dr. H. P. Miles.....	Duke
Dr. D. C. Buck.....	Eldorado	Dr. S. P. Rawls.....	Altus
Dr. J. J. Caviness.....	Hedrick	Dr. W. H. Rutland.....	Altus
Dr. W. H. Clarkson.....	Blair	Dr. W. E. Sanderson.....	Altus
Dr. E. E. Crowe.....	Olustee	Dr. G. G. Spears.....	Altus
Dr. B. J. Davis.....	Hot Springs, Ark.	Dr. S. P. Strother.....	Altus
Dr. Raymond H. Fox.....	Altus	Dr. Jno. S. Stults.....	Olustee
Dr. D. L. Garrett.....	Altus	Dr. H. R. Taylor.....	Eldorado
Dr. H. H. Hyde.....	Eldorado	Dr. R. Z. Taylor.....	Blair
Dr. S. H. Landrum.....	Altus	Dr. D. E. Wilson.....	Elmer
Dr. J. W. McCray.....	Martha		

JEFFERSON COUNTY.

Dr. T. E. Ashinhurst.....	Waurika	Dr. C. M. Maupin.....	Waurika
Dr. O. E. Clements.....	Hastings	Dr. J. W. Moore.....	Addington
Dr. A. H. Cranfill.....	Grady	Dr. G. W. Murphy.....	Addington
Dr. ——— Dawsey.....	Ringling	Dr. G. W. Murphy.....	Addington
Dr. J. I. Derr.....	Waurika	Dr. J. M. Stephens.....	Hastings
Dr. G. R. Dixon.....	Sugden	Dr. L. B. Sutherland.....	Ringling
Dr. A. B. Halsted.....	Petersburgh	Dr. G. C. Wilton.....	Ryan
Dr. A. R. Lewis.....	Ryan		

JOHNSON COUNTY.

Dr. G. B. Ballard.....	Mannsville	Dr. H. B. Kniseley.....	Tishomingo
Dr. J. F. Booth.....	Mill Creek	Dr. J. S. Ledgerwood.....	Tishomingo
Dr. Guy Clark.....	Milburn	Dr. J. T. Looney.....	Tishomingo
Dr. J. J. Clark.....	Milburn	Dr. F. C. Norris.....	Coleman
Dr. G. M. Combest.....	Mill Creek	Dr. W. B. Reeves.....	Wapanucka
Dr. W. F. Cottrell.....	Milburn	Dr. J. G. Sharp.....	Mill Creek
Dr. W. R. Covey.....	Mannsville	Dr. T. W. Stallings.....	Tishomingo
Dr. S. L. Cummings.....	Ravia	Dr. O. J. Stamps.....	Wapanucka
Dr. G. H. Dye.....	Mill Creek	Dr. F. B. Stobaugh.....	Mannsville
Dr. J. M. Ellis.....	Wapanucka	Dr. W. W. Vannoy.....	Tishomingo

KAY COUNTY.

Dr. W. K. Bell.....	Blackwell	Dr. H. O. Gowey.....	Newkirk
Dr. H. H. Bishop.....	Tonkawa	Dr. A. R. Havens.....	Nardin
Dr. A. P. Gearhart.....	Blackwell	Dr. W. M. Johnson.....	Peckham

KAY COUNTY (Continued).

Dr. J. A. Jones.....Tonkawa
 Dr. W. G. Lemon.....Nardin
 Dr. Allen Lowery.....Blackwell
 Dr. Lloyd Martin.....Newkirk
 Dr. D. W. Miller.....Blackwell
 Dr. B. F. Newlon.....Ponca City
 Dr. Geo. H. Nieman.....Ponca City
 Dr. O. C. Northrup.....Braman

Dr. F. H. Norwood.....Braman
 Dr. E. J. Orvis.....Blackwell
 Dr. A. S. Risser.....Blackwell
 Dr. W. A. T. Robertson....Ponca City
 Dr. H. M. Stricklen.....Tonkawa
 Dr. J. H. Voris.....Nardin
 Dr. E. E. Waggoner.....Tonkawa

KINGFISHER COUNTY.

Dr. E. R. Cavett.....Kiel
 Dr. A. B. Cullum.....Hennessey
 Dr. Chas W. Fisk.....Kingfisher
 Dr. C. O. Gose.....Hennessey

Dr. J. A. Overstreet.....Kingfisher
 Dr. Newton Rector.....Hennessey
 Dr. A. L. Share.....Kingfisher

KIOWA COUNTY.

Dr. A. Barkley.....Hobart
 Dr. J. M. Bonham.....Hobart
 *Dr. Calvin E. Bradley.....Mt. View
 Dr. J. R. Bryce.....Snyder
 Dr. M. E. Chambers.....Gotebo
 Dr. J. R. Dale.....Hobart
 Dr. M. Gray.....Mt. View
 Dr. A. H. Hathaway.....Mt. View
 Dr. J. T. Hamilton.....Snyder

Dr. L. H. Huffman.....Hobart
 Dr. H. C. Lloyd.....Hobart
 Dr. F. F. Martin.....Roosevelt
 Dr. J. A. Muller.....Snyder
 Dr. C. R. Preston.....Mt. Park
 Dr. J. M. Ritter.....Cold Springs
 Dr. G. W. Stewart.....Hobart
 Dr. A. L. Wagoner.....Hobart
 Dr. T. L. Willis.....Lone Wolf

LATIMER COUNTY.

Dr. H. L. Dalby.....Wilburton
 Dr. E. L. Evans.....Wilburton
 Dr. E. B. Hamilton.....Wilburton
 Dr. T. L. Henry.....Wilburton
 Dr. Garnet A. Kilpatrick...Wilburton

Dr. Geo. A. Kilpatrick.....Wilburton
 Dr. J. F. McArthur.....Wilburton
 Dr. J. A. Munn.....Wilburton
 Dr. R. L. Rich.....Red Oak
 Dr. I. C. Talley.....Wilburton

LE FLORE COUNTY.

Dr. J. B. Beckett.....Spiro
 Dr. S. D. Bevell.....Heavener
 Dr. C. B. Billingsley.....Cowlington
 Dr. J. M. Bolger.....Poteau
 Dr. W. W. Brown.....Cameron
 Dr. O. S. Burrows.....Wetumka
 Dr. E. L. Collins.....Panama
 Dr. S. C. Dean.....Howe
 Dr. W. M. Duff.....Braden
 Dr. E. N. Fair.....Hodgens
 Dr. J. J. Hardy.....Poteau
 Dr. H. Hardy.....Bokoshe
 Dr. H. W. Harrison.....Shady Point
 Dr. W. O. Hartshorn.....Spiro

Dr. W. E. Jones.....Wister
 Dr. R. E. Lester.....Cowlington
 Dr. R. W. Miner.....Williams
 Dr. G. A. Morrison.....Poteau
 Dr. R. L. Morrison.....Poteau
 Dr. C. H. Mahar.....Spiro
 Dr. John Plumlee.....Poteau
 Dr. M. Plumlee.....Poteau
 Dr. I. S. Raney.....Heavener
 Dr. E. E. Shippey.....Wister
 Dr. W. A. Stewart.....Heavener
 Dr. J. B. Wear.....Poteau
 Dr. B. D. Woodson.....Poteau

LINCOLN COUNTY.

Dr. J. W. Adams.....Chandler
 Dr. W. G. Bisbee.....Chandler
 Dr. F. C. Brown.....Sparks
 Dr. W. H. Davis.....Chandler
 Dr. J. J. Evans.....Stroud
 Dr. H. M. Fagain.....Chandler
 *Dr. S. E. Gayman.....Agra
 Dr. J. O. Glenn.....Stroud
 Dr. E. F. Hurlbut.....Meeker

Dr. J. H. Jansing.....Tryon
 Dr. C. L. Kerfoot.....Wilzetta
 Dr. A. M. Marshall.....Chandler
 Dr. C. M. Morgan.....Chandler
 Dr. W. A. Pendergraft.....Carney
 Dr. J. C. Williams.....Stroud
 Dr. H. M. Williams.....Wellston
 Dr. F. W. Wyman.....Stroud

LOGAN COUNTY.

Dr. E. O. Barker.....Guthrie
 Dr. Pauline Barker.....Guthrie
 Dr. C. B. Barker.....Guthrie
 Dr. A. G. T. Childers.....Mulhall
 *Dr. C. M. Compton.....Coyle
 Dr. C. F. Cotteral.....Guthrie
 Dr. F. Y. Cronk.....Guthrie
 Dr. J. W. Duke.....Guthrie
 Dr. F. B. Erwin.....Wellston

Dr. P. F. Erwin.....Wellston
 Dr. L. A. Hahn.....Guthrie
 *Dr. W. M. Hatfield.....Mulhall
 Dr. C. B. Hill.....Guthrie
 Dr. J. S. Houseworth.....Guthrie
 Dr. Thos. Lauderdale..Oklahoma City
 Dr. Benton Lovelady.....Guthrie
 *Dr. Earl D. McBride.....Navina
 Dr. J. L. Melvin.....Guthrie

LOGAN COUNTY (Continued.)

Dr. L. A. Newton.....Guthrie
 Dr. G. S. Petty.....Guthrie
 Dr. Lewis. Phillips.....Seward
 Dr. H. C. T. Richmond.....Marshall
 Dr. J. H. Rinehart.....Meridian

Dr. W. W. Rucks.....Guthrie
 Dr. Frank Scott.....Crescent
 Dr. D. Stevens.....Guthrie
 Dr. A. A. West.....Guthrie

LOVE COUNTY.

Dr. D. Autry.....Marietta
 Dr. W. V. Batson.....Marietta
 Dr. C. A. Beeler.....Burneyville
 Dr. T. J. Jackson.....Marsden

*Dr. M. D. Looney.....Burneyville
 Dr. A. E. Martin.....Marietta
 *Dr. W. F. Mathews.....Bomar

MAJOR COUNTY.

Dr. A. R. Hughes.....Ringwood
 Dr. B. J. Johnson.....Fairview

Dr. Elsie L. Specht.....Fairview

MARSHALL COUNTY.

Dr. M. D. Belt.....Woodville
 Dr. T. A. Blaylock.....Madill
 Dr. W. L. Davis.....Kingston
 Dr. Y. H. Funk.....Madill
 Dr. J. I. Gaston.....Madill
 Dr. W. D. Haynie.....Powell

Dr. John A. Haynie.....Aylesworth
 Dr. J. L. Holland.....Madill
 Dr. E. F. Lewis.....Kingston
 Dr. W. H. Ussery.....Lebanon
 Dr. S. P. Winston.....McMillan

MAYES COUNTY.

Dr. J. L. Adams.....Pryor
 Dr. J. D. Bewley.....Locust Grove
 Dr. C. S. Branson.....Locust Grove
 Dr. W. C. Bryant.....Chouteau
 *Dr. G. A. Gooch.....Markham
 Dr. J. E. Hillis.....Pryor
 Dr. J. E. Hollingsworth.....Strang
 Dr. W. D. Hill.....Chouteau
 Dr. J. D. Leonard.....Pensacola

Dr. S. W. Minor.....Strang
 Dr. J. L. Mitchell.....Pryor
 Dr. E. L. Pierce.....Locust Grove
 Dr. J. R. Preston.....Adair
 Dr. Carl Puckett.....Pryor
 *Dr. S. C. Rutherford.....Chouteau
 Dr. G. W. Tilly.....Pryor
 Dr. J. L. Wharton.....Salina
 Dr. L. C. White.....Adair

MCLAIN COUNTY.

Dr. J. S. Childs.....Purcell
 Dr. O. O. Dawson.....Payne
 Dr. I. N. Kolb.....Dibble

Dr. T. C. McCurdy.....Purcell
 Dr. W. C. McCurdy.....Purcell
 Dr. G. M. Tralle.....Purcell

MCCURTAIN COUNTY.

Dr. J. B. Chastain.....Broken Bow
 Dr. A. W. Clarkson.....Valliant
 Dr. J. A. Davis.....Idabel
 Dr. Ben L. Denison.....Garvin
 Dr. A. S. Graydon.....Idabel
 Dr. C. R. Huckaby.....Valliant
 Dr. W. B. McCaskill.....Idabel
 Dr. C. R. McDonald.....Broken Bow
 Dr. C. T. McDonald.....Garvin

Dr. W. L. Moore.....Broken Bow
 Dr. A. T. Moreland.....Idabel
 Dr. W. A. Moreland.....Idabel
 Dr. P. M. Richardson.....Millerton
 Dr. Chas. F. Shufford.....Broken Bow
 Dr. D. O. Spencer.....Valliant
 Dr. G. O. Todd.....Bismark
 Dr. R. D. Williams.....Idabel
 Dr. N. D. Wood.....Millerton

McINTOSH COUNTY.

Dr. Dyton Bennett.....Texanna
 Dr. G. W. Graves.....Hitchita
 Dr. N. P. Lee.....Checotah
 Dr. D. E. Little.....Eufaula
 Dr. J. H. McCulloch.....Checotah
 Dr. A. B. Montgomery.....Checotah
 Dr. T. C. Randle.....Checotah
 Dr. J. N. Shaunty.....Eufaula

Dr. F. L. Smith.....Fame
 Dr. A. J. Snelson.....Checotah
 Dr. W. A. Tolleson.....Eufaula
 Dr. L. K. Truscott.....Onapa
 Dr. B. J. Vance.....Checotah
 Dr. J. C. Watkins.....Checotah
 Dr. G. W. West.....Eufaula

MURRAY COUNTY.

Dr. J. A. Adams.....Sulphur
 Dr. H. G. Bailey.....Sulphur
 Dr. L. N. Brown.....Davis
 Dr. J. W. Haden.....Sulphur
 Dr. J. C. Lester.....Davis
 Dr. A. V. Ponder.....Sulphur

Dr. Wm. H. Powell.....Palmer
 Dr. G. L. Spurlock.....Sulphur
 Dr. J. T. Slover.....Sulphur
 Dr. G. W. Slover.....Sulphur
 Dr. W. M. Tucker.....Sulphur

MUSKOGEE COUNTY.

Dr. S. W. Aiken..... Muskogee
 Dr. H. T. Ballantine..... Muskogee
 Dr. W. D. Berry..... Muskogee
 Dr. J. L. Blakemore..... Muskogee
 Dr. J. M. Brown..... Muskogee
 Dr. B. H. Brown..... Muskogee
 Dr. Edwin Davis..... Haskell
 Dr. C. E. DeGroot..... Muskogee
 Dr. J. J. Dial..... Muskogee
 Dr. R. N. Donnell..... Muskogee
 Dr. H. S. Drummond..... Wainright
 Dr. K. M. Dwight..... Muskogee
 Dr. A. N. Earnest..... Muskogee
 Dr. A. W. Everly..... Muskogee
 Dr. F. B. Fite..... Muskogee
 Dr. W. E. Floyd..... Muskogee
 Dr. S. J. Fryer..... Muskogee
 Dr. C. M. Fullenwider..... Muskogee
 Dr. J. R. Graves..... Council Hill
 Dr. A. W. Harris..... Muskogee
 Dr. C. W. Heitzman..... Muskogee
 Dr. C. L. Hill..... Haskell
 Dr. J. T. Hollingsworth... Douglas, Ariz.
 Dr. Sessler Hoss..... Muskogee
 Dr. O. E. Howell..... Oktaha
 Dr. W. R. Joblin..... Porter
 Dr. Emma Starr Keith..... Muskogee
 Dr. O. C. Klass..... Muskogee
 Dr. W. S. Larrabee..... Haskell
 Dr. John Lee..... Haskell
 Dr. J. B. Lightfoot..... Muskogee

Dr. A. J. Lovell..... Memphis, Tenn.
 Dr. B. P. Nesbitt..... Muskogee
 Dr. W. B. Newton..... Muskogee
 Dr. J. T. Nichols..... Muskogee
 Dr. J. G. Noble..... Muskogee
 Dr. B. P. Norvell..... Steeleville, Mo.
 Dr. I. B. Oldham..... Muskogee
 Dr. J. H. Plunket..... Porum
 Dr. C. V. Rice..... Muskogee
 Dr. John Reynolds..... Muskogee
 Dr. H. C. Rogers..... Muskogee
 Dr. C. T. Rogers..... Muskogee
 Dr. J. H. Sanford..... Muskogee
 Dr. E. J. Sapper..... Warner
 Dr. H. A. Scott..... Muskogee
 Dr. H. D. Shankle..... Afton
 Dr. G. A. Smithett..... Muskogee
 Dr. A. L. Stocks..... Muskogee
 Dr. J. H. Stolper..... Muskogee
 Dr. M. K. Thompson..... Muskogee
 Dr. C. A. Thompson..... Muskogee
 Dr. W. T. Tilly..... Muskogee
 Dr. J. S. Vittum..... Muskogee
 Dr. G. C. Wallis..... Fort Gibson
 Dr. F. L. Walton..... Muskogee
 Dr. J. C. Warmack..... Muskogee
 Dr. F. E. Waterfield..... Muskogee
 Dr. J. H. White..... Muskogee
 Dr. Fred J. Wilkiemeyer... Muskogee
 Dr. J. H. Woodcock..... Muskogee

NOBLE COUNTY.

Dr. J. J. Barber..... Laverne
 Dr. S. F. Brafford..... Billings
 Dr. D. F. Coldiron..... Red Rock
 Dr. Lewis Gaddy..... Stratford
 Dr. Frank L. Keeler..... Perry
 Dr. Lambertus Kuntz..... Perry

Dr. O. E. Lovelady..... Red Rock
 Dr. E. L. Norton..... Hennepin
 Dr. B. A. Owen..... Red Rock
 Dr. T. F. Renfrow..... Billings
 Dr. Bruce Watson..... Perry

NOWATA COUNTY.

Dr. J. E. Brookshire..... Nowata
 Dr. B. F. Collins..... Nowata
 Dr. F. R. Collins..... Nowata
 Dr. J. B. Haggard.... South Coffeyville
 Dr. D. D. Howell..... Nowata
 Dr. Russell L. Kurtz..... Nowata
 Dr. D. M. Lawson..... Nowata

Dr. Wm. M. Nairn..... Nowata
 Dr. M. B. Scott..... Delaware
 Dr. L. T. Strother..... Nowata
 Dr. J. P. Sudderth..... Nowata
 Dr. J. G. Thomas..... Alluwee
 Dr. G. A. Waters..... Lenapah
 Dr. J. T. Wilkinson..... Lenapah

OKFUSKEE COUNTY.

Dr. C. M. Bloss..... Okemah
 Dr. W. H. Davis..... Castle
 Dr. W. C. Griffith..... Weleetka
 Dr. F. E. Hilsmeier..... Weleetka
 Dr. H. A. May..... Okemah
 Dr. L. A. Nye..... Okemah

Dr. J. M. Pemberton..... Okemah
 Dr. J. C. Pitchford..... Castle
 Dr. J. S. Rollins..... Paden
 Dr. Jno. L. Sims..... Weleetka
 Dr. B. Watts..... Okemah

OKLAHOMA COUNTY.

*Dr. E. P. Allen..... Oklahoma City
 Dr. J. M. Alford..... Oklahoma City
 Dr. Leila E. Andrews... Oklahoma City
 Dr. F. M. Bailey..... Oklahoma City
 Dr. A. B. Baird..... Oklahoma City
 Dr. C. E. Barker..... Oklahoma City
 Dr. Archie Bee..... Oklahoma City
 Dr. A. L. Blesh..... Oklahoma City
 Dr. Rex G. Bolend.... Oklahoma City
 Dr. Floyd E. Bolend.... Oklahoma City

*Dr. T. A. Buchanan... Oklahoma City
 Dr. F. C. Burns..... Oklahoma City
 Dr. L. H. Buxton..... Oklahoma City
 *Dr. F. K. Camp..... Oklahoma City
 *Dr. A. B. Chase..... Oklahoma City
 *Dr. P. C. Christian... Oklahoma City
 Dr. W. H. Clement.... Oklahoma City
 Dr. H. H. Cloudman... Oklahoma City
 *Dr. C. E. Clymer.... Oklahoma City
 Dr. Paul H. Crawford.. Oklahoma City

OKLAHOMA COUNTY (Continued).

Dr. W. C. Cummings.	Oklmulgee, Okla.	Dr. Geo. D. McLean.	Oklahoma City
Dr. S. B. Cunningham.	Oklahoma City	Dr. O. P. McNair.	Oklahoma City
Dr. A. E. Davenport.	Oklahoma City	Dr. J. F. Messenbaugh.	Oklahoma City
*Dr. E. F. Davis.	Oklahoma City	Dr. L. J. Moorman.	Oklahoma City
Dr. C. R. Day.	Oklahoma City	Dr. S. L. Morgans.	Oklahoma City
Dr. W. E. Dicken.	Oklahoma City	*Dr. N. R. Nowlin.	Oklahoma City
Dr. W. E. Dixon.	Oklahoma City	Dr. John S. Pine.	Oklahoma City
Dr. E. G. Earnheart.	Oklahoma City	Dr. J. R. Phelan.	Oklahoma City
Dr. R. T. Edwards.	Oklahoma City	Dr. J. A. Reck.	Oklahoma City
Dr. C. D. Ferguson.	Oklahoma City	Dr. Horace Reed.	Oklahoma City
Dr. E. S. Ferguson.	Oklahoma City	Dr. Lea A. Riely.	Oklahoma City
Dr. C. J. Fishman.	Oklahoma City	Dr. J. W. Riley.	Oklahoma City
Dr. T. H. Flesher.	Edmond	Dr. H. M. Roland.	Oklahoma City
Dr. W. A. Fowler.	Oklahoma City	Dr. J. B. Rolater.	Oklahoma City
Dr. W. A. Fullington.	Oklahoma City	Dr. S. M. Sackett.	Oklahoma City
Dr. Geo. L. Fulton.	Oklahoma City	Dr. W. T. Salmon.	Oklahoma City
Dr. Ruth A. Gay.	Oklahoma City	*Dr. F. M. Sanger.	Oklahoma City
*Dr. H. H. Gipson.	Oklahoma City	Dr. F. B. Sorgatz.	Oklahoma City
*Dr. J. F. Hall.	Oklahoma City	Dr. Millington Smith.	Oklahoma City
Dr. J. S. Hartford.	Oklahoma City	Dr. James W. Stevens.	Oklahoma City
Dr. Karl Haas.	Harrah	Dr. S. N. Stone.	Edmond
*Dr. J. B. Holliday.	Oklahoma City	Dr. M. E. Stout.	Oklahoma City
Dr. J. L. Hoshall.	Oklahoma City	Dr. E. S. Sullivan.	Oklahoma City
Dr. R. M. Howard.	Oklahoma City	Dr. C. B. Taylor.	Oklahoma City
Dr. R. L. Hull.	Oklahoma City	Dr. W. M. Taylor.	Oklahoma City
Dr. W. J. Jolly.	Oklahoma City	Dr. H. C. Todd.	Oklahoma City
Dr. Chas. W. Joyce.	Fletcher	Dr. C. W. Townsend.	Oklahoma City
Dr. J. F. Kelly.	Oklahoma City	*Dr. C. O. Von Wedel.	Oklahoma City
Dr. J. F. Kuhn.	Oklahoma City	Dr. W. J. Wallace.	Oklahoma City
Dr. E. S. Lain.	Oklahoma City	Dr. L. F. Watson.	Oklahoma City
Dr. Geo. A. Lamotte.	Oklahoma City	Dr. M. W. Weir.	Oklahoma City
Dr. Wm. Langsford.	Oklahoma City	Dr. W. W. Wells.	Oklahoma City
Dr. N. E. Lawson.	Oklahoma City	Dr. Eva Wells.	Oklahoma City
Dr. C. E. Lee.	Oklahoma City	Dr. A. K. West.	Oklahoma City
Dr. W. P. Lipscomb.	Oklahoma City	Dr. L. M. Westfall.	Oklahoma City
Dr. Ross D. Long.	Oklahoma City	Dr. A. W. White.	Oklahoma City
Dr. T. R. Longmire.	Oklahoma City	Dr. A. A. Will.	Oklahoma City
*Dr. R. E. Looney.	Oklahoma City	*Dr. C. W. Williams.	Oklahoma City
*Dr. J. C. Mahr.	Oklahoma City	Dr. Ira J. Wood.	Jones
Dr. J. T. Martin.	Oklahoma City	Dr. H. H. Wynne.	Oklahoma City
Dr. J. H. Maxwell.	Oklahoma City	*Dr. A. M. Young.	Oklahoma City
Dr. D. D. McHenry.	Oklahoma City	*Dr. A. D. Young.	Oklahoma City

OKMULGEE COUNTY.

Dr. J. E. Bercaw.	Oklmulgee	*Dr. B. W. Hole.	Morris
*Dr. V. Berry.	Oklmulgee	Dr. W. G. Little.	Oklmulgee
Dr. H. E. Breese.	Henryetta	Dr. C. W. Ming.	Oklmulgee
Dr. W. G. Brymer.	Dewar	Dr. C. M. Mitchener.	Oklmulgee
Dr. W. M. Cott.	Oklmulgee	Dr. R. Mooney.	Henryetta
Dr. T. O. Crawford.	Beggs	*Dr. J. A. Oliphant.	Preston
Dr. A. H. Culp.	Beggs	Dr. J. Lee Riley.	Henryetta
Dr. A. H. Herr.	Oklmulgee	*Dr. Loyal B. Torrance.	Oklmulgee

OSAGE COUNTY.

Dr. W. H. Aaron.	Pawhuska	Dr. W. H. Lane.	Fairfax
Dr. Thos. Berry.	Hominy	Dr. Ira Mullins.	Hominy
Dr. K. L. Colley.	Bigheart	Dr. Q. B. Neal.	Pawhuska
Dr. T. J. Colley.	Hominy	Dr. Benj. Skinner.	Pawhuska
Dr. C. H. Dewey.	Washington, D. C.	Dr. H. L. Summers.	Osage
Dr. J. W. Ennis.	Pawhuska	Dr. Harry Walker.	Pawhuska
Dr. James Fraley.	Hominy	Dr. Roscoe Walker.	Pawhuska
Dr. G. W. Goss.	Pawhuska	Dr. Divonis Worton.	Pawhuska
Dr. Fred Jones.	Pawhuska		

OTTAWA COUNTY.

Dr. A. M. Cooter.	Miami	Dr. E. A. Leisure.	Fairland
Dr. F. R. Deans.	Fairland	Dr. G. P. McNaughton.	Miami
Dr. G. A. DeTar.	Miami	*Dr. Blair Points.	Wyandotte
Dr. F. M. Edwards.	Oaks	Dr. J. M. Tucker.	Carmen
Dr. J. C. Jacobs.	Miami	Dr. F. L. Wormington.	Miami

PAWNEE COUNTY.

Dr. C. W. Ballaine.....	Cleveland	Dr. J. L. Leheew.....	Pawnee
Dr. C. E. Beitman.....	Skedee	Dr. G. H. Phillips.....	Pawnee
Dr. F. S. Bobbit.....	Terlton	Dr. H. B. McFarland.....	Cleveland
Dr. J. C. Hawkins.....	Cleveland	Dr. E. T. Robinson.....	Cleveland
Dr. J. J. Johnson..	West Fork, Arkansas	Dr. E. M. Thompson.....	Cleveland
Dr. W. Kelley.....	Terlton	Dr. R. E. Waggoner.....	Pawnee

PAYNE COUNTY.

Dr. C. W. Bacon.....	Yale	Dr. Eli Hughes.....	Stillwater
Dr. C. H. Beach.....	Glencoe	Dr. J. S. Jacoby.....	Cushing
Dr. J. H. Cash.....	Glencoe	Dr. D. F. Janeway.....	Stillwater
Dr. L. A. Cleverdon.....	Stillwater	Dr. H. C. Manning.....	Cushing
Dr. Benj. Davis.....	Cushing	Dr. H. McQuown.....	Stillwater
Dr. Estella Edwards.....	Cushing	Dr. J. B. Murphy.....	Stillwater
Dr. R. W. Holbroke.....	Perkins	Dr. C. E. Sexton.....	Stillwater
Dr. E. M. Harris.....	Cushing	Dr. C. D. Simmons.....	Orlando
Dr. W. B. Hudson.....	Yale	Dr. Chas. Sleybaugh.....	Yale

PITTSBURG COUNTY.

Dr. J. F. Baker.....	McAlester	*Dr. P. S. Johnston.....	Indianola
Dr. F. J. Baum.....	Savanna	Dr. James C. Johnston.....	McAlester
Dr. J. A. Burnett.....	Hartshorne	Dr. L. C. Kuyrkendall.....	McAlester
Dr. V. H. Barton.....	McAlester	Dr. LeRoy Long.....	McAlester
Dr. H. N. Bussey.....	Pittsburg	Dr. T. H. McCarley.....	McAlester
Dr. T. S. Chapman.....	McAlester	Dr. R. A. Munn.....	Kiowa
Dr. J. E. Davis.....	McAlester	Dr. J. P. Nelson.....	Dow
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Next Meeting—Oklahoma City, July 13-15, 1915.

Address all communications to the Secretary, Dr. R. V. Smith, Tulsa.

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CANCER OF THE UTERUS.

Dr. John Overton, Tulsa, Oklahoma.

The consideration of cancer in any form must give every serious thinking physician great concern for two reasons: First, because of our paucity of knowledge concerning it, and, Second, because of the great harvest of death it annually reaps, having no respect for sex, age or nationality.

The latest report from the Bureau of Vital Statistics at Washington gives the number of deaths occurring from cancer and other malignant tumors, in 1913, as fifty thousand. Out of this number, approximately eight thousand were of the female genital organs. Out of every one hundred thousand population for 1913, seventy-nine died of cancer. Out of one thousand deaths after the age of forty-five, approximately one hundred and twenty are due to cancer.

It is believed by most observers that cancer is on the increase. Whether this is real, or apparent from an improvement in the diagnosis and more careful registration, is difficult to say. It may occur at any age, but is usually a disease of middle life, or after. It is certainly more frequent in women than in men, and in standard works it is said that cancer of the cervix occurs as a primary disease more frequently than any other site. Cancer of the breast and body of the uterus may occur in virgins. Cancer of the cervix usually occurs in parous women. As a rule the earlier cancer develops the more malignant is the type and rapid its progress.

Though thousands of dollars have been spent in investigation, the cause of cancer is yet undetermined. Many believe that local trauma, especially when oft repeated, is at least a factor in its development. Hence, a lacerated cervix as a rule precedes malignant change. We have three varieties of uterine cancer: First, Epithelioma or squamous-celled cancer of the cervix, involving its vaginal surface. Second, Adeno-carcinoma or cylindrical-celled cancer of the cervix involving the canal, and Third, Adeno-carcinoma of the body. From the primary focus the disease may form a tumor presenting in the vagina, as a cauliflower-like mass, or there may be a deep ulcer with undetermined edges. If the trouble starts within the cervical canal there may be extensive infiltration without external signs. The disease may travel either through the lymph or blood vessels, producing a local extension or metastasis. In this way the bladder, ureter, rectum, parametrium, broad ligaments, pelvic and abdominal glands are affected by slow extension, and metastasis may occur in any part of the body.

The cancer cells live for a time and die as other cells and provide meat for saprophytic organisms. We may also have other mixed infection in conjunction with the malignant growth. Such complications are partly the cause for the foul odor observed, and for the anemia and cachexia due to the absorption of toxic material.

Since the treatment of the disease offers only a small percentage of cures, it is most important that we familiarize ourselves with the symptoms and signs which suggest malignancy, or diseased conditions liable to undergo malignant change. There are not many of us who do not have among our clientele many women. Bearing in mind the liability of this disease, whenever consulted, we should go into the history of the menstrual life most minutely. There are many benign conditions which present similar symptoms and these, of course, have to be differentiated.

Among the things that should be made note of in the history are: Acute, severe bleeding, or slight staining following various mild irritants or mild exertion, such as, after coitus, urination, straining at stool, etc.

Metrorrhagia and especially bleeding occurring after the establishment of menopause is important. The occurrence of a foul, sero-sanguinous discharge which is almost in itself diagnostic; the existence of a growth or ragged ulcer, especially if very friable, is almost positive evidence. Pain is not an early sign and usually is due to involvement of the pericervical tissue.

When we have decided that there is a probability of a malignant disease, make a most thorough and careful pelvic and vaginal examination. If in a suspicious case the uterus has been curetted, the scrapings should be saved for examination. If there is a visible trouble which is not well-defined enough to make diagnosis sure, a small section may be removed and sent to a competent pathologist.

The presence of cancer once determined—what then shall we tell the patient and what treatment should we advise? Without operation ten years is a long limit and death may come within a few months. Death in cancer of the cervix may be due to slow sepsis or to uremia following involvement of the ureters. Those giving best results are early cases, especially within the first three months after the first signs. The prognosis is much better in women past fifty and much worse in the young and pregnant women. We must, before advising operation, determine whether the case is operable. Careful rectal and cystoscopic examinations as well as palpation of the broad ligaments and periuterine tissues are made, remembering that in a few cases the infiltration may be inflammatory.

Baldy claims that not over 5 per cent of cases of cancer of the cervix are cured, and 75 per cent of cancer of the body. Only about one-third of the cases when examined are operable. Out of 166 cases studied by Cullen, 103 were operable; of these 61 were epitheliomas, with 21 per cent recovery. Twelve adeno-carcinoma of the cervix with 16 per cent recovery, and 30 adeno-carcinoma of the body with 66 per cent recovery. In skilled hands the immediate mortality should not be over 10 per cent, where good judgment is used. Operation may have to be discontinued after opening abdomen, due to involvement of liver, etc. In favorable cases with most radical operations we cannot hope for a cure of over 25 per cent, and this only for the three-year limit. Where operation is decided on, we may choose either the vaginal or abdominal route. The immediate mortality is much lower by the vaginal route, though permanent benefit is much greater by the abdominal route, where a radical technique similar to that of Wertheim is employed.

Death following operation is usually due to shock, sepsis, peritonitis, or injury to the ureters. Where the case is not suitable for operation there

are a number of things used for their local antiseptic and cauterant effects. Various sera also have been employed, but without special or constant benefit. Besides many drugs which have been used in the past, the actual cautery and fulguration, there are two that deserve special mention: The Acetone treatment of Gellhorn and the special method of Dr. Percy in using heat for deep penetration. These seem to be most effective in cleaning up the local trouble, making the patient more comfortable and checking, if not curing, the growth. They both penetrate deeply and do not produce an eschar or charring, which tends to check drainage. I believe both of these methods are a great advance, both in the treatment of inoperable cases and as a preliminary to more radical operation later.

Radium recently has been used extensively by Dr. Kelly and his reports are unusually favorable. Every physician should feel his individual responsibility to his community and to his patients and endeavor by every respectable means to increase his own and the public's appreciation of this most serious matter.

THE PATHOLOGICAL BREAST AND ITS TREATMENT.*

Fred Yohn Cronk, A. M., M. D., Guthrie, Oklahoma.

In presenting this subject it is my intention not to dwell upon classical symptoms and tumor classification, but to emphasize the thorough comprehensive examination of pathological lesions, and insist upon proper immediate treatment. It is not sufficient to talk with the patient of a certain lesion. The lesion must be seen and felt.

I shall confine my remarks to the pathological breast. How often do patients on reaching the surgeon for treatment of this organ say: "I've noticed that condition for a long time, but it never bothered me;" or even make the statement that a physician thought so lightly of it that an examination was not asked for, or if examined, said: "Do not bother it, if it does not bother you." I have in mind a specific case: A lady 32 years old married two years, noticed a lump the size of a hickory nut just above the upper outer quadrant of left breast, seemingly on the muscle edge between breast and axilla, in the region of the so-called "axillary prolongation" of the breast. Attention was directed to it by pain brought on by sweeping. The family physician was consulted and without an examination, said: "Go home and forget about it." I was communicated with by letter, and suggested that the patient in question insist upon an examination. Again the condition was looked upon lightly, and as I was to be in the East within a few weeks, matters rested until that time, a period of three or four months since first noticed. Clinically it was a benign tumor. Under local anesthesia I removed the tumor, giving it a very wide dissection, as the capsule was adherent in many places, suggesting the possibility of malignancy. The gross diagnosis was carcinoma confirmed by the microscope. The wound was cauterized and closed with drainage. Of necessity the complete breast operation with axillary glands was delayed a couple of days, but felt safe owing to the wide primary dissection. The patient is now well, two years following the operation.

It is the unusual, the unexpected, that demands our attention. We must be certain in our diagnosis if we expect to give the best to our patients, and with one or two exceptions, breast tumors should be explored and proper treatment immediately instituted. Recognition of pathological tissue in the gross is imperative. The frozen section is an excellent help, but regardless of frozen section diagnosis, the surgeon will do the big operation

*Read in Section on Surgery, Oklahoma State Medical Association, Bartlesville May 12, 1915.

if he suspects malignancy from the gross. Remember the microscope may miss the malignant part of the tumor; it covers only a small area while the eye scans every part as laid open by the knife.

The successful surgeon is the surgical pathologist. Not only does it mean success in curing the disease, but it cures the disease with the minimum mutilation.

The breast has only an external secretion; it is richly supplied with lymphatics, draining principally to the axilla and anterior mediastinum, and following in the course of neighboring blood vessels and fascia covering muscular tissue. The whole picture suggests but one thing—treat promptly and radically. Remove the smallest amount of tissue necessary for a cure.

Benign hypertrophies, both the virginal and gravidity, are rare, and should always be borne in mind. The senile parenchymatous type occurs in the cancer age, and at the same time has a marked tendency to cancerous degeneration. The picture of non-carcinomatous portions of carcinomatous breasts correspond to senile parenchymatous degeneration, and are often published in the literature as "Abnormal involution", "Schimmelbusch's disease," and "Mastitis chronica cystica." In all the hypertrophies the only safe procedure is excision of the entire breast, for it is only in selected cases that restricted work effects a cure.

The most common breast tumor of the benign group is the fibroadenoma. This includes the various tumors of fibrous origin occurring between 17 and 40 years of age. Pain is infrequent. They may have periods of quiescence lasting over several years, then again growth is quite rapid.

The true adenofibroma occurs between 14 and 30 years of age and is definitely encapsulated. This tumor and the rare cystic adenoma, in which the glandular element markedly predominates, may be included among these above mentioned. It is of special interest only to the pathologist to further subdivide this group. Suffice for the surgeon to differentiate between benignancy and malignancy.

The intracanalicular myxoma deserves special mention. It is a hyaline myxomatous fibrous tissue which immediately surrounds the acini and ducts. The hyaline appearance is especially diagnostic in the gross specimen. It is not painful in early stages and appears as a movable tumor with a distinctly elastic feel. As with other fibrous tumors the growth may be periodic. As the growth continues pain may be an annoying feature, especially marked before the menstrual period. There is little tendency to malignancy, though any sudden and rapid enlargement should be looked upon with suspicion, especially in women over 35 years of age.

Where tumors are small and well outlined, excision of the tumor is safe, but in more advanced cases the whole gland should be removed. Rapid growth always suggests the larger operation for malignancy is probable in any case.

Cystic conditions demand considerable consideration. Simple cysts, dermoids, etc., should be completely excised and where there is any doubt as to malignancy, exploratory incision should be made with immediate cauterization, and the radical breast operation done if cancer exists.

While it is the purpose of this paper to emphasize treatment early in malignant conditions, diagnosis of all forms of tumors is imperative for permanent help. The percentage of cures depends upon the stage of diagnosis and treatment. The radical operation alone offers cure in cancer.

The cause of cancer is still unknown. The accepted morphologic criterion of malignancy is when the so-called "basement membrane" is "broken through", though the cellular characteristics of carcinoma are sometimes

seen before this rupture occurs and demands just as urgent treatment. This emphasizes the question: "When is cancer?" The gross specimen in many cases must guide the hand. Heredity or family predisposition is traced in about 20% of cases. Traumatism, including pre-existing benign tumors, a history of mastitis and the like are given as a factor in from 50% to 65%. From these figures trauma and irritation in some form seem to stimulate the tissues to a malignant growth. About 9% of all breast tumors are cancerous and of this number 70% to 75% occur between the ages of 35 and 60. Any tumor occurring in the breast of a patient over 35 years of age that cannot be definitely diagnosed benign, should be treated as cancerous. It is better to err on the side of removing too much tissue than too little, for the recurrent cancer is invariably hopeless.

DISCUSSION.

Dr. White, Muskogee: Mr. Chairman and Gentlemen: This subject of cancer of the breast, of the pathological breast, is one which should be of decidedly more interest to the profession than it is. Nearly all of the physicians have arrived at that point where they take cognizance of symptoms of pelvic disorder suggesting growth, but so many of them never examine a breast when their attention is called to it that there is a lump present. In the State of Oklahoma last year the death census amounted to 2,342, and out of that number the cause of death was stated as cancer in rank third. It seems to be on the increase. Increased last year over the year before, so it shows in taking up this matter that we are working along the right line. Cancer of the breast can occur and does occur in children or young girls and young boys as well as it does in elderly people, but of course not so frequently. Recently I removed an adenofibroma from a breast. In the laboratory examination it was reported that it was not malignant. The men doing surgery, I think, take more note of breast tumors than the general practitioner, those practicing medicine exclusively, and I think it should be impressed upon the minds of those men the importance of the examination of the breast. It don't make any difference what the patient complains of; whether they say there is pain or not, the breast should be examined.

As Dr. Cronk remarked in his paper, so many doctors pay no attention to this condition. A patient will say: "I have had a lump in my breast for some time but have had no pain." The doctor will say: "Let it alone. It is doing pretty well; you are in good health; not losing weight; there is no enlargement of the glands." It is silly and absurd to wait until we have enlargement of those glands; until we have a malignant tumor.

The suspicious time, the time we have the most of these cancers is between the ages of 25 and 30 years, but it is possible and we do have them in much younger people and we should always bear that in mind and not wait, but operate when you can get a good result. The result of early operations for breast malignancy are better than any other operation.

Dr. Foster, McAlester, Okla.: I have never yet felt that the profession as a whole regarded this condition with sufficient seriousness as Dr. White has put it. A married lady came to me not very long ago and said: "I want your advice on a little lump in my breast." Two or three others had seen it and she did not think an operation was necessary. As soon as I got hold of the lump I said: "You want to get rid of this and get rid of it right now." It was about the size of a hickory nut. The operation was done. It has been shown that there is such a thing as precancerous state and as fast as we can recognize that we should check these conditions, and as soon as we do we are going to make cancer a thing of the past. I think

most conditions should be dealt with promptly. Between 20 and 25% have been found not to materialize.

Dr. Hartford, Oklahoma City: A few years ago an educational movement sent out a paper entitled "Cancer in Women." They recognized the fact that the medical profession was not acting upon these cases and the move was taken to bring about the question of early diagnosis and we all know the benefit of that move. There is one thing in the paper that was mentioned that seems to me to be an excellent thing. That is, that we sometimes must not depend upon the pathological diagnosis but operate upon the clinical diagnosis in these cases.

Dr. Watson, Oklahoma City: It has already been brought out about the importance of a complete examination of the axillary glands. The glands should always be examined if a radical operation is not going to be needed after the skin has an incision. I recall an instance in which only two glands seemed to be affected and at the time of the operation sixteen glands were removed and every one showed carcinoma.

Dr. Houser, Tulsa, Okla.: It seems to me that all cases of tumors of the breast that are malignant we should not hesitate about operating. I believe we make an error when we do not do radical operations.

Dr. Rotter, Parsons, Kans.: In cases of this kind I have seen one doctor call it one thing and another call it another. I feel as the doctor who just spoke that if you are satisfied that it is a tumor that you should not resort to mythology but do radical operations.

Dr. Cronk: Someone mentioned the pain in the breast. The benign tumors as a rule are painful, while malignant tumors in the early stages are not always painful, so if the patient suggests anything wrong with the breast an immediate examination should be insisted upon.

If they say they are not painful, the possibilities are that you had better remove the whole breast. There are, however, tumors that are benign and not painful. The Clinical Surgeons of North America appointed a committee concerning publicity. I think it has done a great deal recently. I have been urging that our local society take up this matter but there has been some controversy, thinking perhaps it would be considered advertising. I think anything that we can get before the people that will convince them of the dangers of cancer is admissible or should be admissible, and not considered as advertising on the part of the people and the societies.

I thank you for your generous discussion.

THE EARLY DIAGNOSIS OF CANCER OF THE STOMACH.

C. J. Fishman, Ph. C., B. S., M. D., Instructor in Internal Medicine,
University of Oklahoma Medical Department.

Because of the great and increasing number of cases of stomach cancer, and the inevitably fatal prognosis except under radical surgical treatment in its incipency, the early diagnosis presents the great problem which has to do with the welfare of the individual afflicted with this dread disease.

The early diagnosis, that is, a diagnosis which will present patients sufficiently early to eradicate a cancer focus completely, is a difficult task and by some authorities conceded to be hopeless in the vast majority of cases. Boas considers that an early diagnosis means the detection of the first anatomic changes, and when these already present clinical manifestations, this stage has long passed. To wait for the development of typical findings is fatal. However, there are certain symptoms which will lead to a presumptive diagnosis upon a basis sufficient to call for surgical interven-

tion and treatment along radical lines, thus giving the patient the only chance for recovery. In the Mayo Clinic they consider that one-half the cancer cases might be diagnosed sufficiently early to perform a radical resection with the expectation of a cure. This is true for the tumors of the pyloric portion which are amenable to this procedure.

From the point of view of treatment, there is increasing hope when it is considered that the operative mortality has been reduced from 64% in Billroth's time to 7% at the present time by the best operators and methods. It must be admitted that these results are well advanced and in keeping with other branches of surgical progress.

Cancer of the stomach per se does not produce symptoms upon which an early diagnosis can be based. When a growth develops in the pyloric end of the stomach (that is, the palpable end), or induces obstructive phenomena by narrowing of the lumen, we can establish a diagnosis to indicate operative procedure; but this is considered by some to be late.

The diagnosis depends upon the most thorough painstaking investigation of each individual case, beginning with the history, past and present, and including the physical and laboratory examinations as far as the means of search are available. Nothing should be neglected in individuals at or past middle age who have irregular and indefinite gastric symptoms which have not been diagnosed.

The investigations of these cases should be taken up under the following groups:

I. History Taking.

According to Smithies formerly of the Mayo Clinic, this part of the investigation is considered most important as leading to a probable diagnosis, for he says, "There is no proved clinical procedure other than history taking which enables one to make an early diagnosis of gastric cancer."

Its importance depends principally upon the pathogenesis of gastric cancer, which according to the best researches has a chronic ulcer basis in the vast majority of cases, while in about a third of the cases its development may be considered primary.

There are, in general, two clinical types of symptoms that are obtained in the history of most patients.

Type I, in which the history is definite and fairly regular for the accepted symptom-complex of chronic recurrent gastric ulcer in which the lesion has undergone malignant degenerative changes. This type is said to comprise about two-thirds of the stomach carcinoma cases. The history shows the symptoms to have been present for a period varying from a few to many years (average about twelve) with periods of remission and comparative good health.

There is pain or discomfort which is related to the time, quality, and quantity of food taking. Light, non-irritating foods induce moderate pain or distress after a relatively short interval of freedom, while coarse, heavy, large meals induce severe discomfort after a relatively long period of freedom. The pain in these cases is relieved by food-taking, alkalies or vomiting. Vomiting is frequent at the height of discomfort and hematemesis is also noticed. Loss of weight occurs during the attacks but is regained during the intervals of freedom and is due principally because the patients reduce their diet for fear of bringing on pain.

During the course of such an attack, the symptoms of beginning malignancy may develop. The pain becomes continuous rather than in attacks, as is typical with an uncomplicated gastric ulcer; but is frequently less severe. Continuous epigastric distress and a feeling of heaviness is noticed.

These symptoms are usually aggravated by food-taking and there is no intervening period of freedom as in ulcer. Loss of weight and strength is progressive and marked. Anemia occurs and occult blood is found in the stools in 93 per cent of the cases if frequently examined. At this time, the malignant process may be said to be early, that is, before cachexia, tumor or severe pyloric stenotic symptoms are present. This is the only time for favorable results in operative treatment.

Type II comprises approximately one-third of the cases in which a previous history of gastric disturbance is practically or entirely absent. These cases are clinically malignant from their incipency and may be termed "primary gastric carcinoma." The total duration of the symptoms averages only a few months—two to ten. The ones in individuals from 40 to 60 years of age, of gastric symptoms resembling chronic gastritis in which there is nausea, eructation, loss of appetite with progressive weakness, anemia and loss of weight, followed by pain aggravated on food-taking with vomiting of blood and gastric retention, is the usual story. The symptoms are continuous and progressive and blood in the stools is the rule. In the later stages vomiting, stenosis and gastric fermentation is present.

II. Physical Examination.

1. **General Findings** such as cachexia, severe anemia, emaciation, etc., are decidedly not to be considered as associated with early cases and need not be discussed here.

2. **Local Findings** are much more important and should be investigated thoroughly, although in early cases very little may sometimes be demonstrated.

(a) **Physical Examination** in early cases, that is, before the development of the tumor mass is not more definite than the findings in ulcer, showing a local point of tenderness and slight rigidity.

(b) **Stomach Tube Findings** are most important when carefully and repeatedly carried out. The presence of macroscopic or microscopic food rests before breakfast, that is, after a ten-hour fast is of the utmost aid in diagnosing a mild degree of retention, which together with other findings will result in valuable conclusions. The French clinicians are in the habit of instilling into the stomach before breakfast 1 liter of normal salt solution and examining the centrifugalized specimen for cancer cells. This can hardly be considered an early finding if positive.

(c) **X-Ray Examinations** in the early cases are of considerable aid in connection with the clinical aspects of the case. The finding of bismuth rests after six hours and the presence of an extremely large ulcer crater with irregular contour are the signs which lead to suspicious malignancy. Carman considers it very difficult to differentiate a chronic pyloric ulcer from an early malignant degeneration. Later, of course, the typical exclusion of shadow is definite and positive, but at this time, the cases cannot be considered as belonging to the early types.

III. Laboratory Examinations.

Laboratory tests should be carried out in all cases. The classical text book findings must not be expected in early cancer and should in general be relegated to a minor position. Their value in checking other findings if properly interpreted, is great. There is, however, hope and expectation that the serological methods of examination will develop tests which will be of specific and definite value when properly worked out. There is at this time no one single method which has been proved to be reliable. Several of them together will frequently justify a positive conclusion.

1. Gastric contents after test meals includes the following examinations:

(a) **Tests for Free HCl.** In developing malignancy upon an ulcer basis, free HCl is the rule so that in this group, the absence of HCl should not be expected and is rare in early cases, although a frequent finding in conditions other than in carcinoma. Inasmuch as an ulcer according to Gluzinski is always accompanied by an active catarrh while cancer never develops without an associated mucous gastritis, he has found that the practical utilization of this fact has enabled him to develop a test which is of definite value. After an Ewald test breakfast there may be a normal amount of HCl. However, after giving a meal of two grated, hard-boiled eggs with a glass of water, the aspiration after one hour shows a reduced amount of free HCl. After a meal consisting of soup, a portion of steak, some potato and bread, the gastric examination after three hours shows a still further reduction in free HCl. Normally, there should be a progressively increased production after each test meal.

(b) **Lactic Acid and Oppler-Boas Bacilli** shows the condition of marked gastric stagnation and therefore need not be considered as an aid to the early diagnosis of gastric cancer.

(c) **Demonstration of Cancer Ferments** according to the Neubauer-Fischer method has shown good results and is a valuable aid in diagnosis. It depends upon the presence of a ferment in cancer which exhibits strong proteolytic powers, capable of converting proteids into amino acids, while normally pepsin converts proteids only to albumoses and peptones. Neubauer and Fischer use a substance, glycytryptophan, which cannot be digested by pepsin but which when acted upon by the ferment of cancer is digested to amino acids. These acids may be determined by treating with bromin which gives a typical color reaction.

(d) **The Wolff-Junghans Test.** After an Ewald's test breakfast in benign achylia, there is noticed a small amount of protein in the gastric contents, while in cancer the protein content is noticeably increased. The method is very simple and said to be satisfactory. The reagent used is an alcoholic-hydrochloric solution of phosphorwolframic acid and the stomach contents diluted in gradations up to 1 to 400. The finding of albumen in dilutions greater than 1 to 100 shows an increased protein content and speaks for an achylia due to cancer.

2. **Blood Serum Tests.** In the serum diagnosis of gastric cancer lies the best hope of a positive specific diagnosis. However, as in all serologic methods dependent upon the production of specific antibodies or ferments, it is doubtful whether a sufficiently early diagnosis will be available to offer a favorable prognosis for intervention surgically. Of these tests the following may be considered:

(a) **The Abderhalden Test** has been studied in a large number of cases but as yet no definite conclusions have been reached in a sufficient number of cases to be of service in diagnosis.

(b) **Complement Fixation Tests** have not been satisfactory in the diagnosis of cancer and the remarks concerning the serum diagnosis in general apply equally here.

(c) **The Kelling Blood Serum Test.** This is a comparatively simple test which has been highly recommended by many workers. It depends upon the hemolytic power of normal blood serum against certain types of foreign blood cells, particularly against hen's corpuscles. The test is carried out by using 0.1Cc of the suspected serum with 1.0 Cc of a 5 per cent emulsion of hens' corpuscles in 0.85 per cent NaCl. This is in-

cubated for 24 hours at body temperature and a positive reaction considered if there is no hemolysis.

3. **Occult Blood in the Stool.** This is considered a very early sign of gastric cancer, but is of course not specific, being found in cases of ulcers as well. However, it is practically a constant finding demonstrable in 93 per cent of gastric cancers, and is a valuable aid in diagnosis together with other signs. The patient should be kept upon a meat-free diet and the stools examined frequently.

4. **The Pathological Diagnosis.** Because of the insidious development of the malignant process and the gradual onset of symptoms upon which a positive diagnosis of cancer can be made, it is obvious that the pathological diagnosis, namely the finding of cancer tissue macroscopically or microscopically gives the most ideal results as far as a diagnosis is concerned. In the course of operative treatment for ulcers all specimens should be submitted to careful pathological examinations. Ulcers yield promptly to skillful medical treatment and if no improvement is noted in three to four weeks, operative interference is indicated and the lesion under the microscope will frequently show early carcinomatous degenerative changes.

Summary.

1. There are a large number of cases of cancer of the stomach which cannot be diagnosed in the early stages. These cases give very little history or definite clinical manifestations. However, a most thorough investigation from all points of view will lead to an increased percentage of early diagnosis and cases amenable to a successful radical cure.

2. All cases of indigestion in individuals past middle age should be submitted to a most thorough and complete examination.

3. A complete careful history is of the utmost importance in leading to a probable diagnosis.

4. The finding of food rests macroscopically or microscopically in the stomach after ten hours; occult blood in the stools, the radiological findings, together with a history of gastric distress and loss of weight in persons of middle or past middle age is significant.

5. The most ideal tests, namely, the specific serum reaction, would give the most favorable results, but because of their late appearance these tests are at our present state of knowledge not available.

6. The development of a carcinomatous degeneration upon the basis of an ulcer is frequently noted even in the presence of free HC1 in the stomach, so that the well-known text book findings of absence of HC1, the presence of lactic acid and Oppler-Boas bacilli cannot be associated with an early diagnosis.

DIAGNOSIS AND MANAGEMENT OF GASTRIC ULCER.

Arthur W. White, A. M., M. D.

It is not the purpose of this paper to give an academic presentation of the symptomatology of gastric ulcer, but rather to emphasize the more important diagnostic points, both old and new, that recent research and attending observations have called to our attention.

In taking up the question of diagnosis of this, or any other, condition, we must needs have some classification from which to work. This is possibly best considered with reference to the ulcer per se, to its location, the attending accidents and complications. These last two may be considered as in a single class.

To clarify, we have, first, gastric ulcer that produces disturbances as such or by reason of the causative condition in the case. Second, we may have a clinical picture resulting from pyloric obstruction, by reason of the contraction of the cicatrice following the healing of an ulcer in or near the outlet of the stomach. Third, the clinical picture produced by perforation or by marked hemorrhage, etc.

Other classifications may be made, for example—as to acute or chronic, or as to various causes. I much prefer the first method stated, because all ulcers are chronic in the sense that they tend to continue and remain permanently. Further, whatever the original cause may apparently have been, the condition which makes the ulcer a fixed condition is the same in practically all cases, i. e., 95%.

As to location of ulcer, so long as it is not at the entrance or exit of the stomach, from a practical standpoint it matters not whether the lesion be on the anterior or posterior wall, or greater or lesser curvature. We then, for the most part, have to deal simply with ulcer of the stomach. All ulcers being tentatively the same, unless by misfortune they may block the outlet of the stomach, perforate the wall of the stomach or open up a blood vessel, which conditions produce new and additional questions for diagnosis, and do not come strictly under the scope of this paper.

The cause of gastric ulcer, or at least the cause of its continuance, is a physiological question. True we find, in the literature, many causes given. Martin, of Baltimore, cites a series of cases in which he demonstrates 36 different causes for gastric ulcer, nevertheless detailed examination showed them all to be in a similar condition, i. e., the gastric secretion was quite similar in all of them. The tendency in an injury of the digestive tract is to heal and in most cases it does heal, except in the stomach or duodenum of certain individuals, e. g., a child may swallow lye producing abrasions in the throat, oesophagus, stomach or intestines. These abrasions, if the child lives, heal usually with scar formation, but they do heal, except in the stomach or duodenum, where often an ulceration develops and continues. The wound does not heal here as in the oesophagus. Investigation demonstrates that there is either an increased free Hcl. or a hypersensitiveness on the part of the mucosa in question to free Hcl.—so it would seem gastric ulcer is a question of hydrochloric acid which is in reality the case. This fact has only rather recently been demonstrated by such men as Weinland, Kemp and Cippy, and very few until quite lately have taken advantage of it in a practical way. However, some four years ago in a meeting of the American Medical Association the elder Jacobi, in the discussion of this subject, called attention to the fact that it is a free Hcl. only that produces pain even in an extreme ulcer, that the other acids and the ulcer itself do not produce pain. This fact which can readily be demonstrated on any ulcer case forms the key to the symptomatology in ulcer cases, whether of the stomach or duodenum. If the stomach of a patient, suffering pain in the epigastrium from ulcer, is emptied thoroughly and washed out, and atropin or orthoform or an alkali introduced, relief is felt immediately; if instead, however, Hcl. is introduced, intense pain is produced at once. Or if sufficient alkali be given a patient suffering with pain from a gastric ulcer, relief is produced almost at once.

The most important symptom in gastric ulcer is this so-called chemical pain, i. e., a pain peculiar to ulcer patients, noticeable chiefly when the stomach is empty and due to the irritant action of Hcl. on the gastric mucosa. Incidentally, patients suffering from hyperchlorhydria often complain of this pain, so we are sometimes confronted with a borderland condition in which we can hardly determine whether an ulcer has or has not begun to develop.

This then is the principal symptom; pain in the epigastrium, occurring when the stomach is empty, or nearly so, and relieved by eating. This pain, too, is aggravated by violent exercise and by massaging or rubbing the abdomen.

With the older authors vomiting was a favorite symptom. I do not believe, however, it is so very common at least in the earlier cases. It occurs early in the morning, if succorhea is present, but more often the patient awakens early without knowing why and is restless and unable to go back to sleep. Pain on pressure of the thoracic vertebrae is quite common, and according to Goodman is valuable in locating the ulcer, first, if pain is produced by pressure on the 4th, 5th, 6th or 7th thoracic vertebrae the ulcer is on the lesser curvature; if down to the tenth, the wall of the stomach; and if from the tenth to the twelfth the greater curvature is the site of trouble.

Tenderness over the epigastrium midway between the umbilicus and ensiform and about one inch to the left of the median line can almost always be elicited. This area is small and consists of from one to three points of special tenderness. These areas are small and correspond in size to the end of the examiner's finger, and are often referred to as finger point tenderness.

Constipation, loss of weight, anaemia and amenorrhoea are symptoms that should always be borne in mind, as being common to gastric ulcer cases.

In eliciting the history of a suspected ulcer patient, one point especially should be borne in mind and sought out, i. e., evidence of blood either in the vomitus or stools. Practically every patient with a chronic ulcer of long standing will give a history of having at some time either vomited bright blood or passed tarry stools. Such a history when accompanied by the chemical pain above referred to, almost gives one the right to make a positive diagnosis of ulcer, if carcinoma can be ruled out. There are other things, however, which are responsible for occult blood, so one should make sure of the definite signs of ulcer which are more those of perverted physiology than of pathological anatomy, as has already been indicated. These signs are determined by examination of the stomach contents. First, the motility of the stomach should be determined by the use of the "motor meal", either the bulky German meal, so-called, or the rice meal of Schmidt. This meal should be given in the evening, and the stomach carefully aspirated in the morning following, the patient being required to remain in bed in the interim. The quantity aspirated **should** not be over 11 cc, but **must** not be over 20 cc, to be considered normal. If there is an excess of this amount retention is present, which is either due to partial obstruction of the pylorus with or without the resulting dilation and muscular atony, or either of these latter without obstruction. Muscular atony, or more properly motor insufficiency, is not an uncommon accompaniment of gastric ulcer that has existed for any length of time. This is undoubtedly due to one or both of two factors—spasm (recurrent) of the pylorus and general muscular weakness.

Following the aspiration of the stomach, an Ewald test meal should be given and the stomach aspirated in one hour. The contents of the stomach thus obtained should be examined for the percentage, if present, of free Hcl. pus cells. Carciniae, blood and eosinophiles—an increased amount of free Hcl. and occult blood are the most important findings, and they especially if eosinophiles are present form the crucial signs of gastric ulcer. The diagnosis, then, is made on the history of blood in stools or vomitus, the continuous and persistent chemical pain, together with the finding of an increased amount of free Hcl. and blood in the gastric contents. The diagno-

sis may be tentatively made on the above findings without the history of blood or the presence of occult blood and with the free Hcl. not exceeding the normal. In this case, however, the patient should be placed on a proper ulcer management and daily examination of the stools, and frequent examination of the stomach contents made for occult blood. It should be remembered, however, that occult blood is a crucial evidence of cancer as well as ulcer, also, that while in the great majority of cases free Hcl. is absent in gastric carcinoma it is present in a small percentage.

Another method employed in the diagnosis of ulcer, as well as other stomach conditions, is in the use of the X-ray, either with plate or fluoroscope. This is probably of more importance in the associated conditions than with the ulcer itself. However, it is frequently possible to see the ulcer with proper handling of the bismuth or barium sulphate meal.

If the stomach is observed immediately after swallowing the bismuth, the size, position and motility can be determined. The patient is again examined, with the fluoroscope, in from 8 to 12 hours, he having been kept quiet and the stomach empty in the meanwhile, when the ulcer, if present, can often be seen. The X-ray is not essential in most cases, although it is of inestimable value in certain typical ones.

I have used the word management in preference to treatment, in this paper, advisedly. In the first place gastric ulcer per se is not a surgical condition, nor indeed is it strictly a medical one in being amenable to drugs. One cannot write a prescription or two, advise a light diet and expect results. The patient must be watched constantly, and his diet changed in amount, kind and frequency, sometimes almost daily. Rest is one of the first requisites; activity increases stomach secretion, hence increases the irritation on the already sensitive gastric mucosa, so the patient should be kept in bed so long as there is free Hcl. and blood present in the aspirated stomach contents and until the acute symptoms have subsided.

The diet probably demands the lion's share of consideration with these cases. The much vaunted "starvation treatment," i. e., of keeping the stomach absolutely empty and depending on nutrient enemata for support, is to be utterly tabooed for empirically it fails and is contrary to all physiological law in the face of gastric ulcer findings. The ulcer, itself, is continued and the symptoms are produced, as has been stated by the excess of free Hcl., if not always at least a part of the time, i. e., even though this acid is normal in quantity when food is present in the stomach, at other times when there is no food in the stomach and when there should be but little or no acid, considerable quantity is found.

Then, too, the gastric mucosa is hypersensitive to the presence of this acid. Now the thing that controls the amount of Hcl. is food, likewise its presence in a measure protects the mucosa from irritation, provided, that food is used which inhibits rather than stimulates gastric secretion. So, frequent feeding is indicated and as milk is the least stimulating of all food it is the ideal in these cases, especially when containing much fat. Hence, milk and cream, equal parts, in small quantities, e. g., one ounce every hour should comprise the whole diet in the beginning. These feedings should be alternated with an alkali, preferably in powder form. The dose to be regulated by the amount of the free acid and the response on the part of the patient. At all events the free Hcl. should be completely neutralized. With this as a basis the diet is gradually added to and the amount of the alkali changed according to the improvement of the patient.

A resume of a series of 21 cases that have come under my observation during the past year shows the following results: Fifteen were discharged as well in from four to nine weeks after being placed on the management;

of these, so far as the cases have been able to be followed, none have recurred. Two of the remainder quit treatment, one in one week and the other in two weeks, apparently because of the hardship incident to the enforced diet. Two others had recurrences and returned for treatment. The recurrence in both cases was due to dietic errors. The remaining two cases were never wholly relieved, although they both left the hospital much improved and were able to go to work.

This series of cases was intended to include only the uncomplicated cases of simple ulcer, however, one of the two which was discharged as improved only, had been operated on four years before for gastroptosis and the stomach motility was doubtless interfered with by reason of the anchorage.

The results of this report seem unusually good, and may be better than would be shown by a larger series, nevertheless, it demonstrates the fact that the simple uncomplicated ulcer will invariably heal when the free Hcl. is corrected, and too, that by the management above outlined the Hcl. can be corrected.

This is an immense subject and one of both interest and importance as is evidenced by the numerous papers which have appeared on this subject in our own society in recent years. Probably no two of them agreed on the cause and treatment. However, I trust I may have demonstrated in this brief outline the importance and value of the modern view of this subject.

SURGICAL ASPECTS OF CHRONIC GASTRIC AND DUODENAL ULCER.*

Horace Reed, M. D., F. A. C. S., Oklahoma City.

Certain operations upon the stomach and duodenum for chronic ulcer and its complications are well established.

Gastro-jejunostomy for chronic ulcer of the duodenum gives such satisfactory results that one is scarcely justified, when once the diagnosis is established, in attempting other methods of treatment. Whether in addition to the gastro-enterostomy, occlusion of the duodenum or resection of the ulcer should be done rests entirely with the individual operator. To us it appears that neither procedure is essential. Occlusion may be considered as harmless, since, as ordinarily performed by the "infolding" method of Moynihan, little or no additional risk is assumed. The same cannot be said of resection, for here there is a decided increase in the hazard of operation while the reasons for resection are theoretical. Mayo (1) resects the ulcer when it is easily accessible. His reasons therefor are not stated. We presume that it is only for the purpose of removing the ulcer and its scar. What harm a healed duodenal ulcer scar would do more than a scar resulting from its removal we fail to appreciate. Neither is likely to be the seat of cancer nor is there any other complication occurring with sufficient regularity as to deserve consideration. We conclude therefore, that gastro-enterostomy, properly performed, is clearly indicated in all cases of chronic ulcer of the duodenum. The operation has a mortality of less than 2% and of those who survive the operation results are satisfactory in 98%.

No less brilliant in its results is gastro-enterostomy for ulcer causing pyloric occlusion, the so-called saddle ulcer. Whether more than the anastomosis is necessary is a debatable question. If we consider only the symptoms from which the patient desires relief, and the promptness and com-

*Read before the Oklahoma City Academy of Medicine, April, 1915.

pleteness of relief by gastro-enterostomy alone, then this operation and no more is entirely justifiable. The debatable question will be reserved for another part of this paper.

Perforating ulcer is altogether a surgical lesion. In certain rare instances patients with perforating ulcer will recover without operation. These must be considered as exceptional cases only. Not only is surgery clearly indicated in perforating ulcer but early surgery is necessary. This is emphasized by the statistics of Hartman & Lecene; (2) "Of 202 operations in perforating ulcer, 96 done in the first 12 hours resulted in a mortality of 39%; 64 operations done between 12 and 24 hours gave a mortality of 56%; of 42 operations done between 24 and 48 hours, 34 died (81%)."

The exact manner of procedure in perforation is as follows: Closure of the perforation; removal of as much of the spilled stomach contents as possible without undue trauma to an already damaged peritoneum; an ample provision for pelvic drainage. Not very much less in importance is the after treatment. The patient must be placed in the Fowler position and the intra-abdominal structure must be thoroughly splinted and kept so, often for several days, with morphine. Whether further operative procedures are to be employed must be determined in the individual case.

If the perforating ulcer is situated at or near the pylorus or duodenum gastro-enterostomy should be performed, provided the patient's condition will permit. If the base of a perforating ulcer is so broad and indurated that a "folding-in" closure of the opening cannot be accomplished securely, resection will be required. It must be remembered that patients with perforated ulcers are suffering from shock or peritonitis or both. Such patients do not well tolerate prolonged or violent intra-abdominal manipulations. Therefore the operation should be gently but rapidly performed.

Persistently recurring hematemesis in chronic gastric ulcer is quite generally accepted as indication for operation. Even the internist will agree to turn his patient over to the surgeon if in spite of rest and other "appropriate" treatment the hemorrhage proves to be unmanageable. In this connection we must insist that comparisons may be odious and cite the following statistics: Lindberg (3) is quoted as having collected 68 cases of ulcer in whom hemorrhage was considered dangerous (1 Liter or more) with a mortality of 7.3% under medical treatment, whereas the mortality in 83 cases borrowed from Kraft's records treated by various forms of operations was 37%.

In the foregoing citation it is not stated whether hematemesis was recurring, nor is there a definiteness as to time operation was performed following hemorrhage. Further, no mention is made as to whether Kraft's cases had first received medical treatment, which, failing, surgery was a last resort. The difficulties to be overcome in the consideration of the surgical aspects of perforating ulcer are diagnostic rather than operative, and the surgeon must remember (a) that severe hematemesis frequently occurs from causes other than stomach ulcer, and (b) that in the operative treatment following hemorrhage, the patient demands consideration rather than the ulcer.

Perigastric adhesions resulting from chronic ulcer, even though the ulcer be long since healed, may interfere with the motility of the stomach to the extent that operation will be required. Here again the problem is largely diagnostic, and generally speaking the presence of such adhesions cannot be determined except on exploration. The frequent association of chronic gastric ulcer with diseases of the gall bladder and ducts justifies mention of the latter structures in the consideration of the surgical aspects of the former; and finally, as Deaver (4) puts it: "In view of the fact that

prevention is greater than cure, I would urge the propriety of acting on a well-reasoned suspicion that a small inhabitant of the right iliac fossa is responsible for much of the serious diseases of the upper abdomen", the surgical aspect of which inhabitant, there can be no question.

We have thus far been specific in seeking to justify surgery for chronic ulcer in certain of its phases. Are there other conditions than those considered which justify definite operative procedure? Mr. Herbert Patterson thinks there is. Rodman and others think so, but for reasons differing widely from the idea advanced by Patterson. The latter considers ulcer as a symptom—or rather as a result. He emphasizes the fact that hyperacidity is such a common finding in chronic ulcer that it might be considered the cause; that if the acidity is not the cause, the cause can be corrected by the treatment which removes or corrects the acidity. He would do this by performing gastro-enterostomy, which operation is practically always followed by a regurgitation of a portion of the alkaline contents of the duodenum back into the stomach. He calls the operation a physiological operation (5). In this respect Patterson stands practically alone. Others look upon ulcer as exerting an inhibitory influence upon the motor activity of the stomach, thus retarding at least, the passage of the stomach contents into the intestine. In this view of the situation justification is found for making a new opening into the stomach—a second communication with the intestine—so that the stomach contents can pass out through one or both openings in normal time. Those who argue in accordance with the above statement call the operation an "anatomical" operation. Experience has shown that the arguments are not supported by facts.

Chronic ulcer, as predisposing to, or being the forerunner of cancer, demands the most serious consideration from all sides. If, as some believe, chronic ulcer is a precancerous lesion, the surgical aspect is clear cut. If, as others think the two are independent lesions, the one not being influenced by the other, then prophylaxis is not a consideration so far as cancer is concerned when dealing with chronic ulcer, surgically. On both sides of this question are to be found some of the foremost men of the world today.

Rodman (6) has been a persistent preacher of the doctrine of ulcer as a forerunner of cancer. In 1908, in a masterly production, he caught the attention of the surgical world. In this he pointed out that the idea was not new, being advanced as early as 1839. He cited the statistics of the Pathological Institute of Kiel from 1872 to 1891, in which it was recorded that 14% of stomach cancers undoubtedly developed from ulcer; and from the same institute during the years from 1891 to 1900 it was found that cancer originated in ulcer in 30% of the cases. He further cited the figures of Mayo (54%), Robson (59.3%), Sapeshko (90%); and of his own cases of stomach cancer for the two years just preceding, each of whom gave clinical evidence of having had ulcer. In the following year Wilson and McCarty (7) published the results of their findings from the pathological examination of 218 cases of supposedly simple ulcer, in which it was found that there was evidence of cancer in 71%. Such preponderance of apparent facts coming from such sources made a deep impression on the medical world, and for a time resection of ulcers or of the ulcer bearing area of the stomach became methods of choice. Thus time and material for study was gained, as a result of which strong opposition to the cancer theory of ulcer finally developed.

In 1913 Sherren (8) reported on the pathological examination of 109 specimens of chronic ulcer resected and found no cancer in any of them. Mr. Patterson (9) at about the same time collected some interesting figures. He cited the statistics of Gressot who followed up a large number of cases of chronic ulcer in whom gastro-jejunostomy without resection had been

performed and found that less than 3% afterward developed cancer. Patterson himself had two such cases die, but found at autopsy that the cancers had originated at a point distant from the ulcers. He further quotes figures given out by Kocher. Kocher was able to follow his cases of gastro-enterostomy performed for ulcer back for a period of 15 years and found that not one had died from cancer of the stomach. Between these extreme views there appears to be developing a more conservative idea, if one can judge from very recent literature. Even some of the former exponents of the radical views appear to be back paddling.

Smithies (10), for instance, practically admits that pathologists may be mistaken as to the identity of a given growth, but he insists that the clinician is far more apt to be mistaken. Mr. Patterson (11) is willing to admit, at least for the sake of argument, that ulcer is productive of cancer, but he insists that if this is so, then gastro-enterostomy is prophylactic, if not curative, of cancer.

Laying aside these controversial propositions we face certain facts. The most appalling fact is that one-third of the deaths resulting from malignancies occurring in the United States is caused by cancer of the stomach—a toll of 25,000 annually. Supplementing this in a significant way is the fact that ulcer of the stomach is far more frequently found in the region of the stomach where cancer is prone to develop. From these facts and from our knowledge of the influences which appear to excite the development of cancer in other parts of the body it would seem easy, without other considerations, to make decision.

Unfortunately, this cannot be done. Therefore we conclude, that, until further experience and observations may make it possible for us to gain a better understanding of the subject, there is not sufficient ground to justify the laying down of any definite surgical procedure for the cure of stomach ulcer, per se, except such as occur in certain definite regions, or for the surgical elimination of ulcer as a prophylactic measure against cancer.

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EDITORIAL

WHAT MAY BE DONE FOR THE NEGLECTED CANCER CASE.

Notwithstanding the efforts of the last few years to teach the urgent necessity of early action in malignant disease, there are still many who come in the late or so-called inoperable stage. Usually it is a disheartening situation, but, nevertheless, such an unfortunate patient should not be sent away without some attempt to bring relief.

To tell a patient that he has cancer is bad enough; to tell him that nothing can be done—that he is doomed—is so cruel that our humanity should cause us to shrink from the ordeal and to look over the field diligently in order to find some means that may offer hope, be it ever so remote.

The published report of the investigations at the Virchow Pathological Institute contains the encouraging information that some twenty-five per cent to thirty per cent of patients dying of the sapping influence of cancer have no demonstrable metastases—that even at death cancer in these cases was a localized process. This report, coming from such an authoritative source, gives justification for a radical excision in many late cases, formerly looked upon as inoperable.

Long before the report referred to was published, Wertheim, of Vienna, practically demonstrated the truth of it in his admirable work in advanced carcinoma of the uterus. In 1913 he was able to report fifty-three per cent of recoveries living and well five years after the operation, out of a total of 715 cases operated in all stages of the disease. His success was due to a wide dissection of the gland-bearing tissue adjacent to and outside the uterus, and in many cases the removal of a part, and sometimes practically all, of the vagina.

In this country during the last few years Werder of Pittsburgh, Pa., and Percy, of Galesburg, Ill., have repeatedly called attention to the strik-

ing remedial effects of the cautery in inoperable uterine cancer. Percy's procedure is extremely radical, and in many desperate cases the end seems to justify the means. By this method the uterine structure is practically destroyed by the introduction into its cavity of a cartridge-shaped cautery, while a trained assistant gives warning of the degree of heat by having his hand about the uterus through an abdominal incision made preliminary to the operation. There seems to be no question that not only many cases so operated remain for a long time quiescent, but that some of them are apparently cured.

Frequently in late cancer of the breast a wide surgical operation followed by systematic Roentgenotherapy has brought relief from an apparently hopeless situation. The same may be said of the good effects of the Roentgen ray in some cases of recurrence after operation.

Again, it is believed by many investigators that radium is a powerful agent for good in numerous inoperable cancers. Naturally, on account of the bulk of the world's supply being produced in Austria, the greater number of the advocates of radium have been found among European investigators, some of whom speak with the greatest enthusiasm. In this country men of the highest standing in the profession, notably Kelly of Baltimore, are taking the keenest interest in the application of radium to the treatment of malignant disease, and their reports carry the conviction that much good may be accomplished by its proper and systematic use.

The important lesson to be learned is to give the late cancer case the advantage of some one of the different means which have brought relief. Let us not send the late cancer victim away to die, but let us help him to secure the service of some one who will at least try to do something for him.

LeROY LONG.

CANCER PROPHYLAXIS.

"In the health of the people lies the wealth of the nation." It is with the view of maintaining the health of the nation that the medical journals of America have decided to put on a campaign of education to prevent cancer mortality.

In adults after the age of forty cancer is one of the most frequent causes of death. It is more frequent than tuberculosis at this time of life. No less than 75,000 people in the United States die of cancer each year. Fully 50,000 of these people should die of old age and not of cancer. Dr. Bloodgood says: "Due to local educational propaganda the per cent of benign cancerous lesions has increased in the past five years from 4 to 18. The late and inoperable cases of cancer of the lip have decreased from 18 to 8 per cent." If such results can be obtained in a small community what a wonderful opportunity for good in the whole nation. The importance of early incision of growths, ulcers and sores slow to heal cannot be too strongly emphasized. In those cases of lip lesions 75 per cent were cured when the lesion has not been previously irritated. Had the lip received previous treatment the same operative methods yielded 33 per cent of cures. Lesions of the lip which do not heal within one month should be removed. In cases so treated Dr. Bloodgood reports 100 per cent cures. Per cent of cures in three months 96, later cures 60.

By what means are we to reduce the mortality of cancer? In view of the fact that we do not yet know the cause of this disease, it is obvious from the statistics above that our means of attack must be early and decisive. If we wait until the enemy is well entrenched we cannot hope to be successful. The medical profession must be the prime mover in this campaign.

Those facts about which there is no professional disagreement, and certainly they are sufficient to convince anyone, should be used in the propaganda. *

Each physician must do his part by spreading information regarding early signs of cancer. It is not necessary to excite fear by the presentation of the hopeless, agonizing side of cancer. Rather instill hope and the importance of early operation during the early stages. It is only by quick frontal attack on the first appearance of the enemy that we may hope to run our cures to the 100 per cent mark.

A few popular articles published in the newspapers will reach many more people in a short time than any other method. Committees appointed from the County Societies to write these articles should avoid technical terms as far as possible and absolutely authentic information should be used.

Cancer at beginning is a local process and the cure is not a drug, serum nor ray, but the scalpel. The more difficult the diagnosis the better the prognosis. When it becomes an easy matter for a layman to recognize cancer in a patient, the case becomes hopeless. Unfortunately these growths are prone to attack healthy subjects, past forty years of age. It may be the breadwinner or the healthy, robust mother of a family. Cancer, however, never begins in a healthy spot. There has been some impairment of the vital forces of the tissues. The precancerous lesion is ever present.

Cancer in the early stages is not accompanied by pain. This is a late symptom. Generally, when manifest, the growth has made great inroads and no doubt established itself in more than one place. Do not therefore expect or look for pain as an early symptom.. In fact the first warnings of cancer do not differ from the warnings of other diseases which at the time are not cancer, but later may develop into cancer. There is no excuse for ignoring the warnings in cases of cancer of the skin, tongue, lips and breast. Malignancy occurring in these structures is always preceded by the precancerous lesion. In case of the skin, tongue and lips, warts, moles and ulcers; in the breast, tumor of some kind.

J. H. W.

EXPLOITING THE CANCEROUS.

For many months, as is well known to medical journalism, there has been developing a movement to make July issues of practically all medical publications in the United States of paramount consideration as to cancer in its various complexities, and it is with amazement that we are called on to witness what seems to be an attempt to place in the limelight a new cure or system of treatment of inoperable cancer, which has for its basis such an extremely fragile foundation that a moment's thought condemns it in the minds of sensible men who believe that the report lacks entire good faith and has only been published for ulterior motives at this time on account of the general propaganda now on in the interest of cancer suppression.

Two cases are reported from an article said to have been published in the New York Medical Journal of Saturday, May 15, by Dr. Silas P. Beebe of New York, and the medical press of the country has offered it the suggestion that "This paper is one of more than usual importance," by W. E. Fitch, editor of Pediatrics. The whole is accompanied with an abstract principally notable for its generalities and conclusions, which may as well be applied to any other system of treatment of cancer. Speaking only from a medical standpoint, we say every physician welcomes reports of apparent cures, even beneficial retardation of growth, diminution of physi-

cal pain or any other relief for the cancerous patient, for from a great mass of such material we may work out eventually, the best course of procedure in these cases, but amazement gives way to honest indignation when one picks up a copy of a popular magazine (June, 1915) and observes the same generalities glossed over thinly to fit the lay imagination, by the side of sensational pictures depicting macro and microscopic cancer, a picture of seven women, one in intense black, accentuating the fact that one of seven die of cancer, while a picture of eleven men serves the same purpose across the spectacular page; the prime mover of the sensational write-up is shown with a dome covered with a mortar board cap of a professor; the whole being so suggestively gotten up that all the patent medicine vendors of the country must feel like kicking themselves for not having worked out a similar scheme for their particular activity.

If this alleged discovery is one of merit, the publication of it in such sensational garb, can only have the effect of giving it a terrible backset in the minds of the profession who must use it. The absurdity of calling attention to a technical treatment of disease in a monthly lay publication, with scare head title and sensational pictures can have only one effect—that of creating the greatest distrust in the minds of the physician.

It seems that honest protests to lay publications to at least leave such matters alone until they are worked out and proved of merit by scientists and properly safeguarded experimentation is of no avail and despite them we are more and more called on to witness cheap imitations of the Friedman fiasco; its pitiable imitation, the Piorokowski Tuberculin or that lamentable imposter on womenkind, "Twilight Sleep." Each of these started out just as does this alleged benefit to our most helpless and tragic sufferers—an article or two in some medical publication, usually one not overly nice as to discrimination, then a rapid jump into the limelight by way of a popular monthly magazine, not read by physicians, but almost wholly by a class of people utterly unable to appreciate the catch phrases and quotations given, whose only object seems to be to lead the reader to believe that at last we have a cure for you or your wretched neighbor, heretofore regarded as incurable.

We hope Beebe's "Atolysin" will cure inoperable cancer. If it does that it should also cure operable cancer; we will feel gratified if it occasionally cures any kind of cancer, but the suspicion is justified that the publication prematurely of results based on such few cases can have no fair object, but that the whole thing is born out of a desire to capitalize, at this time of widespread cancer propaganda, notoriety and its consequent financial gain. It is to be regretted also that there is not some way to sentence the magazine authorities of such unwarranted publicity to their just oblivion.

DR. LEROY LONG, DEAN OF THE MEDICAL DEPARTMENT.

Dr. LeRoy Long of McAlester, the newly elected Dean of the Medical Department of the State University, is a man who will be entirely satisfactory to the medical profession of the State. His close association with and active interest in organized medicine in Oklahoma has given him a wide acquaintance among the doctors of the State and the profession could not be better represented in the capacity of head of our only State Medical Institution than by the selection of Dr. Long to fill this position.

His ability as a teacher is thoroughly recognized by the members of the profession who know him best and there is no doubt but what he will add dignity and prestige to the Faculty of the University.

For twenty years Dr. Long has been practicing medicine in Indian Territory and Oklahoma. During the past twelve years he has been located in McAlester, where by constant application and exhibition of great ability he has developed an extensive surgical work. He has given much of his time to surgery doing special post-graduate work in most of the great clinics in this country and abroad, and will consequently go to his new position thoroughly equipped to give the students the advantage of his long experience and extensive study.

Dr. Long was born in North Carolina Jan. 1, 1869. He graduated of Louisville Medical College in 1893 and was for a short time an instructor in the institution; he is a member of the County, State and National Medical Organizations, a Fellow of the American College of Surgeons and a member of many other special societies.

Dr. Long will remove to Oklahoma City some time this summer and will be prepared to take up his work at the opening of the University in September.

THE AMERICAN MEDICAL ASSOCIATION.

This meeting of the National Association will no doubt go on record as having been the most largely attended of any meeting ever held on the Pacific Coast, due to the added drawing features of the Panama-Pacific Exposition. Physicians who never before attended a meeting were present, due to the double attractions offered, and the meeting from a scientific standpoint was most successful. A remarkable condition was noted in this meeting never before had in any meeting, and that was that every scientific section, subcommittee, house of delegates, commercial exhibit and registration booth was comfortably housed under one roof. This building was the beautiful auditorium situated in "Civic Center" which, after the Exposition, reverts to the City of San Francisco. The scientific exhibits alone were worth the time and trouble of going many miles to see and it is gratifying to note that each year these exhibits are seen by more physicians and are becoming justly important features of the meeting.

In the House of Delegates the business of the meetings was efficiently handled by President Rodman and the reference committees. The social features offered by the San Francisco profession were on par with those offered by Los Angeles a few years ago, and while not superior to that meeting, were just as good as could be, and one must understand California and Californians to know what that means.

Surgeon General Rupert Blue was elected President; Albert Vandever, Albany, 1st Vice-President; Geo. B. Evans, Dayton, 2nd Vice President; Donald Campbell, Butte, 3rd Vice-President; Herbert C. Maffatt, San Francisco, 4th Vice-President; Alex. R. Craig, Chicago, Secretary, re-elected; William A. Pusey, Chicago, Treasurer, re-elected; M. L. Harris, Chicago, W. T. Councilman, Boston, and Thos. McDavitt, St. Paul, were re-elected to the Board of Trustees.

Oklahomans registered as follows: W. Albert Cook, Tulsa; R. W. Holbrook, Perkins; Walter Penquite, Chickasha; C. A. Thompson, Muskogee; Leigh F. Watson, E. S. Lain, A. L. Blesh, Oklahoma City; F. H. Clark, El Reno; M. K. Thompson, Muskogee; J. L. Lehew, Pawnee; William Nairn, Nowata; E. M. Poer, Jester; J. W. Pollard, Bartlesville; Fred S. Clinton, Tulsa; John B. Murphy, Stillwater; R. M. Sweeney, Sapulpa.

Detroit was selected for the 1916 meeting.

LIABILITY OF SURGEON FOR NEGLIGENCE, NOT FOR RESULT OF OPERATION.

We note with great pleasure and interest below a decision written by Judge Brett, of the Supreme Court Commission, Division No. 1, of Oklahoma. A study of the laws and rulings heretofore existing with reference to sponge cases will show that in most instances a harsh rule has been in effect that the presence of such or other foreign body was ipso facto malpractice. The decision shows broad common sense in that it assumes that man is not infallible, that by the greatest care other mistakes are made by men, therefore this mistake might be made, and if so, it assume to discharge the maker of liability only if it be shown that he used due diligence and care to prevent the accident occurring. We believe this is fair to all parties. The rule that there can be no defense—that is what the old rule amounts to—is too harsh to be entertained a moment by any fair person. The accident has occurred to our best operators, under the most carefully prepared surroundings calculated to eliminate the danger, and to mulct and ruin a man over it, is simply too outrageous to consider with coolness. A very good lawyer to whom this was submitted states that it will be necessary for a defendant to show that he has used every reasonable care to prevent the accident by checking up after the operation, etc., and all other customary steps, and conversely, that it will fall on the plaintiff to show that such was not the case, if this rule is adhered to. Personally we are thankful that our own courts have the courage to upset silly tradition by ruling along broad lines of common sense and fairness.

Albert Lee Cassingham, et al, Plaintiffs in Error.

vs.

Dr. V. Berry, Defendant in Error, (Okla.)

James S. Ross, Oklahoma City, Okla.

Belford & Hiatt, Okmulgee, Okla.

Lex V. Deckard, Okmulgee, Okla.

Counsel for Defendant in Error.

I. An assignment of error based on improper remarks and misconduct of an attorney, cannot be maintained, unless the objections are timely made, and an exception is taken to the ruling of the Court if adverse, or to the failure of the Court to interfere, if the Court remains silent, when such objection is made.

II. An action against a surgeon for negligently leaving gauze sponges in the body of the patient upon whom he had operated, which resulted in her death; the defendant is entitled to an instruction on his theory of defense, and it is not error for the court to instruct the jury, that though they believe the defendant did leave the sponges in the body of the patient, and her death was the natural and proximate result thereof, yet if they also believe, that in the performance of the operation, he exercised ordinary care in keeping track of the sponges, and seeing to it that they were all removed, before the incision was closed, he could not be held liable for negligence. The gist of such action is not based upon the result of the operation, but upon negligence in its performance, and the rights of the parties, must be tested by whether or not the defendant exercised that degree of care in performing the operation, that is imposed upon him by law.

The plaintiff contended "The inherent vice in this instruction is the mistake the court made in assuming and inferring as a matter of fact that the defendant could leave the sponges in the abdominal cavity in the exercise of ordinary care."

The Court says: "The doctrine advanced in this position of the plaintiff is too exacting for human affairs. It is tantamount to saying that if ordinary care had been used, no mistake could have occurred.

It assumes that the exercise of ordinary care would have rendered a human being infallible. And it is a matter of common knowledge, based on every day experience, that even in the exercise of the utmost care, all men do make mistakes, and it was not error, under the pleadings and evidence in this case, for the Court to instruct the jury, that though they believe the defendant left the sponges in the body of the deceased, and her death was the natural and proximate result thereof, yet if they also believe from the evidence that the defendant, in performing this operation, exercised ordinary care in keeping track of the sponges, and seeing to it that they were all removed before the incision was closed, he could not be held liable for negligence. The basis and gist of this action was not the result of the operation, but negligence in the performance of it. * * * * Whether or not the defendant exercised that degree of care in performing the operation, that the law imposed upon him, was the paramount question, and the test of the rights of the parties." * * *

The second request—by the plaintiff—was to the effect that "if the jury found that the sponges were left in the body by the negligence of the nurse, yet, if the defendant continued to attend on the deceased, it was his duty to have discovered the sponges, and to have removed them."

The Court: "This is in effect the same request as number one. It is not justified by the pleadings, and should have been refused for the same reason." * * *

TETANUS ANTITOXIN.

The notes on a series of cases in which tetanus antitoxin was injected intraspinally are published by M. Nicholl, Jr., New York (Journal A. M. A., June 12, 1915). They consist of the reports of twenty cases collected in New York, in which the following treatment was recommended, prompted by the results of animal experiments in the Research Laboratory of the Department of Health. "From 3,000 to 5,000 units into the lumbar region on the spinal canal, preferably under an anesthetic, the volume of fluid injected being brought up to 10 or 15 c.c. by the addition of sterile normal saline, the exact amount being regulated according to the age of the patient and the amount of spinal fluid withdrawn. 2. Ten thousand units intravenously at the same time. 3. Repetition of the intraspinal dose in twenty-four hours. 4. A subcutaneous dose of 10,000 units three or four days later." In four of the cases the above treatment was strictly followed and about half of the patients were seen personally by Nicoll in consultation. In others the physicians have been kept in constant touch by telephone or otherwise during the progress of the case. Sixteen of the patients recovered. They were not selected, and while a few might have gotten well under other treatment, the results are so much more favorable that there can be but little doubt that the intraspinal dosage was responsible.



PROCEEDINGS OF ANNUAL MEETING, BARTLESVILLE, MAY 11-12-13, CONTINUED.

REPORT OF COMMITTEE FOR THE CONTROL OF CANCER.

Annual Meeting Oklahoma State Medical Association, Bartlesville, May 11-13, 1915.

Mr. President and Fellows: After a meeting at McAlester on April 10th, at which problems before us were discussed, we wish to present the following for your consideration:

From the statistics obtainable, it would appear that cancer is increasing in frequency. In one state the reports indicate that it is nearly three times more frequent than it was thirty years ago. In one of the newer Western states it appears as third in the list of diseases causing the state's highest mortality.

What is true of other states seems to be true of Oklahoma. The reports are incomplete, but they show that out of 2142 deaths in 1911 there were 194 deaths from cancer. In 1912, out of 2349 cases of death, there were 248 due to cancer. In 1913 there were 261 out of 2146; and in 1914 there were 296 out of 2199.

At first sight it may be difficult for us to understand the real gravity of the cancer question. When we reflect, however, upon reliable statistical reports as to its prevalence, we cannot evade the conclusion that it is a most serious question which should have the careful attention of both the doctor and the people whom he serves. Trustworthy reports seem to establish the appalling fact that out of every eight women reaching thirty-five years of age, one will develop cancer; that out of every twelve men reaching that age, there will be one who will have cancer.

In our survey of the situation we have reluctantly come to the conclusion that far too little is being done to relieve the cancer menace in Oklahoma, and your Committee is of the opinion that the medical profession of the State must bear a good deal of the responsibility for this state of affairs. We believe, therefore, that the essential step of prime necessity is to, in some way, interest the family doctor to the extent that he will carry this burden upon his conscience. While there are, unfortunately, many instances in which cancer has developed to an irremediable extent before the doctor's attention is called to the trouble, we believe that in many cases persons having suspicious symptoms consult the doctor early. To illustrate:

A woman 51 years of age had an alarming uterine hemorrhage. An investigation showed that she had an extremely advanced cancer of uterus, involving the vagina and the periuterine tissues. The hemorrhage was caused by sloughing. This patient had consulted a well-known St. Louis physician several years before on account of intermenstrual bleeding, and was told it was due to disturbances incident to the menopause. Since she had lived for several years, it is likely she had an adenocarcinoma of the body, and that if she had been properly advised, and the necessary surgical operation had been promptly and properly done, she would not have died of cancer.

This is not an unusual case at all. In fact, it is the type of story too commonly elicited in taking the history of cancer patients, and may, we believe, be traced to two principal sources. In the first place, many of the text-books written only a comparatively few years ago enumerate certain classical symptoms of cancer—if of the uterus, the foul discharge, the sloughing cervix, the cachectic condition of the patient; if of the breast, it

is laid down in the list that the skin must adhere to the underlying growth, that the axillary glands must be palpable, and that, again, there must be present the cancer cachexia. To those who have given real study to this question, the symptoms just enumerated appear as indications of an unrecognized, long-standing, malignant disease. They are symptoms and signs found in the terminal stages of cancer, and when they are distinctly present there can be no doubt that the patient's chances of recovery, no matter what procedure may be instituted, have been greatly lessened—often entirely destroyed. If the doctor would render real service to his patient, he must learn to recognize the early danger signals, and act with intelligent decision long before the appearance of the signs of terminal pathology.

In the second place, we believe from the evidence before us that the average doctor shrinks from the necessity of making sensational and painful pronouncements. He dislikes to feel that he may be making, or to have it felt that he would "make a mountain out of a mole-hill". He may have secret convictions, but he hesitates to express them until it is too late to be of the greatest service to his patient.

Now, if these things are true, it is an elementary proposition that if we would reduce the mortality from cancer; if we are to save the cancer victims of this state, we doctors must first realize the necessity for definite and prompt action.

Your Committee believes, therefore, that the matter of first importance in this work is to systematically educate the profession to this end. This may be done:

1: Through the County Societies. We recommend that each County Society have a cancer meeting once every six months; that the Secretary of the Society send personal notices to every legal practitioner in the county inviting them to be present, whether they are members of the County Society, or not; that when convenient, the Society invite someone who has given special study to the cancer question to be present and discuss the different phases of it.

2: We believe that much good may be done by the systematic study of the cancer question by the medical journals of the state, and we recommend that the Journal of our State Association devote one number each year to the cancer question, and that the Secretary of our Association communicate with other medical journals of the state requesting their co-operation.

3: We recommend that at each annual meeting of our State Association one hour be devoted to a discussion of the practical points in connection with the timely recognition and treatment of cancer, immediately after the reading of the report of the Cancer Committee.

4: Your Committee recommends that the physicians of the State make a careful record of cancer patients coming under their care, including in such cases as may be practicable a pathological examination of tissue, and that such records be furnished to the Cancer Committee, said Committee to index and systematize the information thus secured, and forward to the Secretary of the State Association for distribution to the physicians of the State twice a year.

Your Committee believes the education of the public the next most important step in this propaganda. On account of ignorance as to the significance of early symptoms, many cases of cancer develop to an inoperable degree before a doctor is consulted at all. This is particularly true in the hidden areas—the uterus and intestinal tract, for instance—but it is not uncommon in other situations. To illustrate:

An unmarried woman, fifty years of age, sent for a doctor on account of an alarming hemorrhage from an ulcer of one breast. For six years she had kept her secret while going about her daily duties, and it was only after the tissues had broken down and an artery had been invaded by the sloughing that she gave up her secret. When informed that she had cancer of the breast to a very advanced extent, she was anxious to have an operation.

For the purpose of educating the public concerning the cancer question, we recommend:

1: That the doctors of the State, in their daily contact with the families to whom they render service, make use of every legitimate opportunity to acquaint their clientele with the early, suspicious conditions that may mean the development of cancer. Your Committee, in the face of the possible charge of tiresome repetition, insists that no human being is so well and favorably situated for giving timely information and advice in connection with such a vital question as is the family doctor.

2: We recommend, for the purpose of educating the public, that short, concise articles on the cancer question be prepared by the editorial staff of our State Journal, consisting of either original articles, or re-editing and condensation of current literature on the cancer question so that it may be appropriate for the lay reader, and that such an article be forwarded by the Secretary of the State Association to each County Society twice a year, with a request that the article be published in the local newspaper. In the preparation of these articles sensational statements should be avoided. Caution and sanity should characterize all our efforts. While we should do everything possible to give real, reliable information, we should steer clear of the possibility of producing morbid fear and distressful forebodings. A bright ray of hope should accompany the stern warning, and emphasis be placed upon the necessity of "finding out what is the matter" in every suspicious condition.

3. In keeping with the recommendations of some of our sister State Associations, we believe that the trained nurse, if properly informed herself, may be of considerable service in the movement for educating the public. To this end, carrying out a suggestion in a recent communication from the American Society for the Control of Cancer, we recommend that the attention of the hospitals of the State, especially those hospitals conducting training schools, be called to the desirability of instructing nurses in the early symptoms of malignant disease.

The cancer quack should be eliminated. We do not know how. He is doing much harm and should go. We leave the means of attaining this end to the Committee on Legislation.

A farmer, forty-two years of age, was advised by his physician to see a surgeon on account of an ulcerating growth on the inside of his cheek, where his chew of tobacco usually rested. The patient was advised to have an immediate radical operation. He refused and consulted a "cancer specialist" in Texas. A paste was applied, the patient parted with all his money, and was sent home "cured". Now he is dying of cancer and his family is in want.

The cancer quack, like the consumption quack, is a soulless, greedy vulture who does much harm in many ways, the chief of which is to, for the sake of money, offer false hope to the cancer patient until his day of grace is forever gone.

Your Committee wishes, finally, to call attention to a comparatively recent report from the Virchow Pathological Institute, in which it was shown that in nearly 30 per cent of cancer cases coming to post-mortem, the disease was still a local process—that there had not been metastases,

but that the patients had died from the sapping influence of the parasitic growth. From a practical point of view this finding is of extreme importance, for it gives new hope of cure after operative procedures, even late in the disease, if the operation be properly and skillfully done. The most important deduction from the report, however, is the practical certainty of the permanent cure of cancer if the indicated operation is performed early in the disease. Hence the necessity of early diagnosis followed by the surgical removal of the cancer, for upon these two things depends the salvation of the cancer patient.

Respectfully submitted,

LE ROY LONG,
GAYFREE ELLISON,
J. HUTCHINGS WHITE,
Committee.

ANNUAL REPORT OF THE SECRETARY FOR THE YEAR BEGINNING MAY 1, 1914, AND ENDING MAY 31, 1915.

To the Members of the Oklahoma Medical Association:

I herewith submit the following statement of transactions for the year indicated. A statement in detail covering all matters has been placed before the Council for its consideration and this report must necessarily be limited by reason of the press of other matters.

A detailed explanation of any phase of the work will be placed before you on request.

Increase in Membership.

The year April 30, 1914, to April 30, 1915, has been the most satisfactory of any in our history from every material standpoint.

Cooperation of County Secretaries.

As a rule and with few exceptions, County Secretaries have filed their reports and remittances weeks earlier than ever before, and the lapses in membership have been less than any previous time.

Our Advertisers.

I wish to again call the attention of our membership to the necessity of more support for the advertisers in our Journal. Our advertisers are only of the highest class and if the product offered in our pages is equal or superior to those not advertised with us, we should by every rule of fairness give them the preference. In this connection I call your attention to the considerable increase of our advertising and the fact that supporting them will increase this source of revenue. I urge you to consider this and help yourselves by helping the advertiser.

Annual Program.

I suggest the adoption of a rule of non-acceptance of numbers on the annual meeting program from members who are not in good standing for the current year at time of going to press with the program.

Amendments to Constitution and By-Laws.

The adoption of the amendment to the Constitution and By-Laws giving the Council the right to hear and decide appeals from either party to any controversy between any constituent society or between individual members of them should be adopted, otherwise we may at any time be placed in an embarrassing situation with no remedy at hand for our protection.

Malpractice Defense.

Each year this question with its problems has been before this body, and at this time power is lodged with the Council to adopt a defense plan when they see fit. Inasmuch as the plan is in successful operation in every state where it has been given a trial, it seems to me that there can be no good reason for further delay in launching the project. It is true that we will perhaps lose a considerable number of members on account of the small added assessment necessary, but this can be greatly avoided in my opinion by patient explanation on the part of those members who understand the good phases of this system of united defense.

CONDENSED STATEMENT OF RECEIPTS AND EXPENDITURES AND BALANCES FROM APRIL 30, 1914, TO APRIL 30, 1915.

Receipts.

Cash on hand May 1, 1914.....	\$1743.89
Received from advertisers.....	1191.05
Received from County Secretaries.....	2998.10
Interest.....	30.00

\$5783.04

Expenditures.

Publication of Journal.....	\$2107.39
Salary of Secretary.....	600.00
Expense, Councilor, Delegates and Legislative Committee.....	434.95
Postage and stamp account.....	92.00
Press Clipping service.....	32.50
Clerical and stenographic account.....	235.75
Reporting annual meeting.....	92.44
Refunds.....	13.00
Petty office expense, ribbons, carbon, telephone, telegraph and express.....	37.24
Treasurer's bond.....	10.00
Belgian Relief Fund.....	100.00
Printing Constitution and By-Laws.....	10.75
Advertising calendars.....	17.00
Certificate of deposit, Commercial National Bank.....	500.00

\$4283.02

Total cash on hand May 1, 1915.....	\$1680.02
Certificates of deposit, Commercial National Bank.....	1500.00

Total resources (cash)..... \$3180.02

Members in good standing April 30, 1914.....	1103
Members in good standing April 30, 1915.....	1324
Gain for the year.....	221

Respectfully submitted,

C. A. THOMPSON,
Secretary-Treasurer-Editor.

PERSONAL AND GENERAL NEWS

Dr. G. H. Butler, Tulsa, has moved to Page, Okla.

Dr. G. A. Wall, Tulsa, spent June with the Mayos.

Dr. J. Howard Baker, McAlester, has located in Indianola.

Dr. J. M. Cooper, Enid, spent June in St. Louis doing post-graduate work.

Dr. C. D. Blachly, Drumwright, visited Chicago and eastern points in June.

Dr. Russell L. Kurtz, Nowata, has assumed charge of the Nowata Sanitarium.

Dr. P. L. McClure, Ft. Cobb, spent June in Chicago doing postgraduate work.

Dr. W. H. Rutland, Altus, has returned from a visit to the Chicago schools and clinics.

Dr. William T. Bogie, Ardmore, located in that city for many years, died Saturday, May 29.

The Central Oklahoma Medical Association will hold its quarterly meeting in Guthrie July 13th.

Dr. R. L. Morrison, Poteau, is in Vossburg, Miss., where he will remain some time on account of his health.

Dr. Floyd E. Waterfield, Muskogee, will spend June, July and August in St. Louis doing special work.

Dr. W. W. Jackson, Vinita, and Miss Helen Beals of Salem, Indiana, were married in Vinita on June 5th.

Dr. L. M. Overton, Fitzhugh, who was seriously injured in May, is able to get around, but has not resumed his work.

Dr. A. J. Willard, Cyril, narrowly escaped death when his car was wrecked on a bridge near that place. He was not injured.

Dr. R. H. Harper, Afton, is being pursued by more than his share of ill luck; he is again in a St Louis hospital for treatment.

Dr. W. E. Sanderson, Altus, has returned from Chicago where he has been confined in a hospital for some time on account of illness.

Dr. E. D. Mecker, Lawton, Surgeon in the Oklahoma National Guard, spent a part of June in San Antonio School of Instruction for Military Officers.

Dr. William Suddeth, a negro physician of Muskogee, has been arrested by the Federal authorities on the charge of violating the Harrison Antinarcotic law.

Dr. G. C. Colby, Gracemont, is the latest candidate to join the self-starter class; he received a painful "cranking" injury, but no fracture while starting his car.

Dr. C. C. Shaw, Mill Creek, an able representative of the profession in the Senate of the last Legislature, has been appointed physician to the McAlester penitentiary.

Dr. Sessler Hoss, Muskogee, has been appointed Chief Surgeon of the Midland Valley Railroad. The Medical and Surgical headquarters of the road will be transferred from Ft. Smith to Muskogee.

Dr. H. M. Stricklen, Tonkawa, narrowly escaped serious injury when his car turned over. He was pinned underneath, but aside from receiving a liberal bath of gasoline, had no other serious accident.

Dr. R. J. Shull, Hugo, has been placed under arrest charged with performing a criminal operation. Dr. Shull states that the operation was one of necessity to save the patient's life and there was nothing criminal about it.

O. W. Stewart, Muskogee, superintendent of the Oklahoma School for the Blind, requests the names of boys and girls in Oklahoma who may have such defect of vision as to make attendance in the common schools impractical. He requests the physicians of the state to send in the names and addresses of any such children, and adds that total blindness is not a necessary qualification for entrance to the school.

NEW BOOKS

SURGERY OF THE BLOOD VESSELS.

By J. Shelton Horsley, M. D., F. A. C. S., Surgeon in Charge of St. Elizabeth's Hospital, Richmond, Va., a Founder and Fellow of the American College of Surgeons; Ex-President of the Richmond Academy of Medicine and Surgery; Member of the Southern Surgical and Gynecological Association, Etc. Illustrated, 304 pages, St. Louis, C. V. Mosby Company, 1915. Price \$4.00.

Those who know and have seen the masterly technic of Horsley will look forward with great interest to an inspection of his work in this particular line. The work of Crile, Halstead, Carrell and Matas has demonstrated the practicability of blood vessel surgery and its obvious need under certain conditions is patent. The technic of Horsley is most admirable. The very great need of appreciation of the importance of this particular work is well known to those surgeons who are faced with the great crises coming to all who do surgery. Transfusion, with which this work has considerable to do, has come to have a fixed value in the hands of surgeons. Aneurysmal and similar work confronts them often and the great difficulty of mastering perfect technic is the stumbling block, not only to amateurs, but to all who attempt the procedure.

We believe that in this monograph, the student and surgeon will find valuable technical knowledge as to practicability, applicability and the indications for the need of this most difficult branch of surgery.

CANCER, ITS CAUSE AND TREATMENT.

By L. Duncan Bulkley, A. M., M. D., Senior Physician to the New York Skin and Cancer Hospital, 230 pages. Price \$1.50 net. Paul B. Hoeber, publisher, New York, 1913.

The author after reviewing the various theories of the causes of cancer concludes that it is due to faulty metabolism of certain cells caused by abnormalities of the blood supplying them. The exciting cause he thinks is usually the presence in the blood of toxins found by bacteria in the intestines and that these are caused largely by a meat diet. Other causes are defective action of the kidneys, anemia and other abnormal conditions of the blood, and abnormalities of secretions of the ductless glands, especially the thyroid. In considering the occurrence and distribution of cancer he shows by statistics that it is rare or absent among the people who eat little or no meat but when these people adopt the diet and customs of meat eaters that cancer increases rapidly. In considering treatment while advocating removal in suitable cases he claims that by suitable diet and hygienic treatment with the aid of some medicine will prevent the occurrence of cancer, will often prevent recurrence after operation and will relieve the suffering of advanced cases.

P. P. N.

DISEASES OF INFANTS AND CHILDREN.

The New (4th) Edition, Revised.

A MANUAL OF DISEASES OF INFANTS AND CHILDREN. By John Ruhrah, M. D., Professor of Diseases of Children, College of Physicians and Surgeons, Baltimore, Md. Fourth Edition, Thoroughly Revised. 12mo volume of 552 pages, 175 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$2.50 net.

This little volume is a decided improvement over its predecessors as to size, yet not sufficient has been added to make it cumbersome to the user.

New chapters have been added on the following subjects: Pellagra, the soy bean in infant feeding, drug eruptions and an interesting account of the Binet-Simon Test for mentality. The work is remarkable for its brevity and compactness and on that account is of especial interest to the busy practitioner and student who need to refresh on the subjects contained.

NERVOUS AND MENTAL DISEASES.

The New (8th) Edition..

NERVOUS AND MENTAL DISEASES. By Archibald Church, M. D., Professor of Nervous and Mental Diseases in Northwestern University Medical School, Chicago; and Frederick Peterson, M. D., formerly Professor of Psychiatry, Columbia Univer-

sity. Eighth edition, revised. Octavo volume of 940 pages, with 350 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

This book consists of two volumes bound in one, the first treating of nervous diseases, the latter of mental. Like many others who have mapped out too wide a field of endeavor, the authors have succeeded in producing a work of by no means uniform excellence. The first volume has no equal in the field of nervous diseases, and very few in any language. As to style and matter this subject as treated here leaves little to be desired.

The second volume is distinctly inferior to the first. In fact it rises little, if any, above mediocrity. We are glad to state, however, that the excellence of the first volume makes the entire work quite worth while.

B. H. B.

CORRESPONDENCE AND MISCELLANEOUS

THE SPECIAL HOSPITAL.

"In the great fight against disease special means and special institutions have at times to be established. This has especially proven so in connection with tuberculosis and with cancer, both of which are so prevalent and possess such a high mortality. Careful research for knowledge of the actual processes and progress of such diseases, and the accomplishing of real protection, and where possible, the application of scientific treatment and the affecting of cures, are only to be attained where regular and systematic study and care can be given.

"In the prevention and treatment of tuberculosis much has been done. The future promises more toward its elimination. With cancer the problem grows more serious every day. Quacks and charlatans recognizing its prevalence, and the fear and credulity of the ignorant public who may be suffering from any ulcer or abdominal growth, have taken advantage of the situation. As a result cancer doctors and cancer hospitals are numerous in most of our large cities. But few of them have as yet been established or are supported by the regular medical profession. To give the public a greater protection and to aid in the fight against quackery, the establishment of a special hospital for the care and treatment of cancer by a member of the Jackson County Medical Society, should receive our interest and support. Such an institution well equipped has been opened by Dr. Halsey M. Lyle at Twelfth and Michigan, Kansas City, and for it we bespeak a visit and every support it may deserve."—Bulletin Jackson County Medical Society.

THE BAKING POWDER PROBLEM.

For a number of years there has been much discussion with regard to the effects of baking powders on the health. While minor objections have been urged against all baking powders, the principal charge of unwholesomeness has been made against baking powders containing alum. This objection is based primarily on the injurious effects of large quantities of aluminum salts. To this objection the answer has been made that the process of decomposition which liberates the leavening gas when alum baking powder is used, produces an oxid of aluminum which is insoluble, and hence not injurious. For the facts in this matter to be fully understood, it must be remembered that the so-called alum now used in baking powder is not the alum used in medicine, being a sodium alum (sodium aluminum sulphate) instead of the official potassium salt. This point is held by some to be important in view of the effects of potassium salts on the system. Cream of tartar is a potassium salt, being potassium acid tartrate.

In the discussion of the baking-powder question, it must be remembered that the practical application of the facts concerns only small amounts of these salts and contemplates an occasional and not a constant use. Few people habitually consume breads made from baking powder, hence the amount of potassium introduced into the system by baking powder is unlikely to be of serious moment as regards health. Potassium salts are frequently taken as constituents of vegetable food, and yet there is no evidence that they disturb metabolism in any way. The question of whether alum used in this way is injurious has been settled by the investigations of the Referee Board of Scientific Experts appointed by President Roosevelt, and its decision may be considered as coming from the court of highest authority. The investigation of this board covered a period of several years and was the most extensive

single investigation ever conducted as to the healthfulness of alum baking powders. The distinguished character and personnel of the board itself lends additional weight to its findings. The board consisted of the following men:

Dr. Ira Remsen, president of Johns Hopkins University.

Dr. Russell H. Chittenden, professor of physiological chemistry, Yale University, and director of the Sheffield Scientific School.

Dr. John H. Long, professor of chemistry in the Northwestern University Medical School.

Dr. Alonzo E. Taylor, professor of physiological chemistry, University of Pennsylvania

Dr. Theobald Smith, professor of comparative pathology, Harvard University.

The board made the following findings:

"Aluminum compounds when used in the form of baking powders in foods have not been found to affect injuriously the nutritive value of such foods.

"Aluminum compounds when added to foods in the form of baking powders, in small quantities, have not been found to contribute any poisonous or other deleterious effect which may render the said food injurious to health. The same holds true for the amount of aluminum which may be included in the ordinary consumption of aluminum baking powders furnishing up to 150 mg. (2.31 grains) of aluminum daily.

"Aluminum compounds when added to foods in the form of baking powders, in large quantities up to 200 mg. (3.09 grains) or more per day, may provoke mild catharsis.

"Very large quantities of aluminum taken with foods in the form of baking powders usually provoke catharsis. This action of aluminum baking powders is due to the sodium sulphate which results from the reaction.

"The aluminum itself has not been found to exert any deleterious action injurious to health, beyond the production of occasional colic when very large amounts have been ingested.

"When aluminum compounds are mixed or packed with a food the quality or strength of said food has not been found to be thereby reduced, lowered or injuriously affected."

In short, the board concludes that alum baking powders are no more harmful than any other baking powders, but that it is wise to be moderate in the use of foods that are leavened with baking powder.

In Dr. Taylor's conclusions, a different aspect of the baking-powder question is brought out. It is shown that the product of all forms of baking powders is laxative, and the suggestion is made that the laxative effects of the continuous use of breads made with baking powder may be injurious. The objection applies to the cream of tartar baking powder which leaves a residue of Rochelle salts, to the phosphate baking powders which leave the phosphate of sodium and to the alum baking powders which also leave the sodium sulphate. Dr. Taylor says: "Apparently, therefore, at present at least, the use of baking powder is associated with the introduction into the alimentary tract of a certain amount of saline cathartic, the salt differing with the use of a particular type of baking powder." In connection with this objection, the amount of soluble residue left by the decomposition of the baking powder becomes of importance.

Here, again, the pertinence of the objection depends on the quantity likely to be eaten. In no case is it likely that a person would consume bread or biscuits enough to get an appreciable effect on the bowels from the laxative produced.

The criticisms with reference to the action of baking powders indicate a tendency to magnify quite incidental matters whenever they seem to favor the interest of one or other manufacturer. Thus the tartrate was at one time highly regarded because it was a product which was destroyed in the system, leaving a natural constituent of the body, that is, potassium carbonate. More recently it has been discovered that the tartrates are only partially metabolized in the system, removing the supposed advantages of the tartrate powders. On the other hand, there is a disposition to emphasize experiments tending to show the power of tartrates to affect the kidneys injuriously, although there is no evidence that such an injurious action can occur from the small quantity present in baking powders. While the objections to alum are unjustified, the physician will do well to inquire carefully into the probability of any alleged injury occurring from other forms of baking powder.—Journal of Indiana State Medical Association,

DIRECTORY, OFFICERS OF OKLAHOMA MEDICAL ORGANIZATIONS, STATE MEDICAL ASSOCIATION.

Annual Meeting, Oklahoma City, May, 1916.

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INFANT FEEDING FROM THE STANDPOINT OF A COUNTRY PEDIATRIST.*

Dr. C. A. Johnson, Kiowa, Okla.

In presenting for your consideration, a paper on this subject, I may not bring to you one fact with which you are not already familiar, or one thought which you have not already considered, but if I can, in any way, bring back to you anything that has been stored away in the recesses of your memory, on account of disuse, or if I can stimulate your interest or strengthen your zeal in this science of feeding, I will feel that this paper has fulfilled the purpose for which it was intended.

The science of infant feeding—for it is a science—is one of the most paramount questions of the hour, and one that no one of us, no matter how well versed he may be in the generalities of the profession, can afford to slight by one jot or tittle, especially if he is working at all in the domain of pediatrics. The reasons for the importance of this subject are many, chief among which is the immediate preservation of life and, further, to prepare the physical economy of the future man to resist with greater strength the perils that are constantly besetting his path from the earliest hours of his life on through the various periods of his whole life to the end, for upon the foundation depends the structure.

Infant feeding a short time ago and infant feeding today are two vastly different propositions. Today, as one of our greatest aids, we have the profession of mothercraft or the enlistment voluntarily of an army of intelligent, knowledge-seeing women, whose entire aim is the preservation of the race, insofar as possible, by intelligent, scientific feeding of their babies, under the tutelage of the most able pediatricists of our land. This movement is rapidly tearing down the barriers of ignorance and charlatanism and superstition that in past years have opposed advancement in our profession most bitterly and, in many ways, successfully. Further, we have as aids various recent scientific discoveries which have rendered and are rendering inestimable services especially to our artificially fed babies.

As commonly elaborated, infant feeding is classed under two heads—maternal and artificial. In connection with maternal feeding let me mention briefly the indications, contra-indications and advantages of this method. Statistics show us that ten artificially fed babies die to one naturally fed, so insofar as possible the slogan of pediatricists, mothers and all concerned should be as it is, "Nurse your baby."

*Read in Section on Pediatrics, Oklahoma State Medical Association, Bartlesville, May, 1915.

As moulders of thought along this line, we can do much. Insist on cleanliness and sanitation. Impress the mother with the importance not only of the necessity of the best of physical health, but also with the need of especial care of the mental attitude and the psychic condition. Any abnormality of any of these conditions enumerated may cause havoc with either the supply or equilibrium of the mother's milk, to the very evident disadvantage of the small consumer. Therefore emphasize these things and impress them thoroughly on your mothers.

Again, insist on and teach regularity, just as much so as you would with your bottle babies. Regularity is absolutely essential, primarily to keep the normal balance of the milk, for very long intervals of nursing lessen the amount of the solid constituents of the milk in their proportion to the water, while shortened intervals, by exciting the epithelial cells of the gland to overwork, thereby increase the amount of solids. In other words, too long intervals cause a too dilute product, and too short intervals cause a too concentrated one. The results of either of these conditions are apparent. The tendency of most mothers is irregular and if they do attempt regularity at all they are inclined to make the intervals much too short with resultant damage to the consumer, for the stomach is unable to properly take care of the amount of food digested, causing colic, indigestion and other intestinal disturbances. Most of the writers on the subject are placing particular emphasis on the four-hour interval of 20 minutes each, and where it can be used at all it is giving excellent results.

Contra-indications are in order when the mother is afflicted with any constitutional disease, when environment is such that her mind and nervous system are in a state of constant tension, and when her habits of diet, rest and sleep are bad. However, if possible at all to do so, get by these conditions and keep the baby on the breast if there is any chance at all. Do not change except as a last resort.

The advantages of maternal feeding may all be summed up in the statement that it is the "natural way," and so subtle a chemist and so wise is our old mother nature, constantly remixing and modifying the product and always on the lookout to meet all the demands, that no artificial science, no percentage formulae, no test tube experiment or laboratory hypothesis are in her class.

In taking up the proposition of artificial feeding, let me state to you again that no set of rules, no percentage formula, no particular process of modifying cow's milk or any other kind, no certain mixture of patent foods, none of these, however successful they might be in the large majority of cases, are going to apply with good results to all babies. Each baby is a distinct individual with his own particular personality and in feeding him successfully this must be considered. And, strange as it may seem, this personality, or idiosyncrasy, or whatever you may feel like calling it, manifests itself to a large extent in the products of elimination of his intestinal tract. In other words, you will accomplish much by an intelligent study of the gastric contents and stools of each individual.

All agree that cow's milk is our best artificial food, and the favorite preparation is known as modified milk. From the countless numbers of formulae to modify cow's milk, I am often constrained to believe that there are as many different formulae as there are practitioners. However, best results in most cases are obtained by an intelligent modification of some kind.

My own method, usually, is to modify the milk by the addition of either oatmeal or barley gruel—oatmeal, if the child is inclined to be constipated, and barley if the bowels are inclined to be too loose. The method of preparing either gruel is to take four heaping tablespoonsful of the

cereal and put into a quart of boiling water; boil four hours and have a quart left; strain and add milk or cane sugar and a little salt to taste; also add a pinch of soda or a little lime water; put in sterile bottles and place on ice. Ordinarily use the whole milk mixture. Sterilize the milk always. This can be done in every home by putting the milk in sterile bottles, corked with sterile cotton. Place the bottles in a deep pan and cover them a little above the level of the milk with cold water. Bring the water to the boiling point and allow it to boil briskly for several minutes, then draw the pan to a cooler part of the stove and let the bottles remain in the hot water for one hour. Remove and cool rapidly. This method brings the milk to the proper temperature for sterilization, requires no expensive apparatus and can be successfully practiced in any home. Both milk and gruel must be prepared freshly every day. The milk and gruel are mixed in the percentage wanted as required and fed in proper amounts at regular intervals. Usually this modification is fed with excellent results, but sometimes when there are intestinal disturbances caused by milk infection, it is best to withdraw the milk altogether for a time and feed only the gruel, but do not push this too far, for the baby has very much better disease resisting powers than it has ability to resist starvation.

Again, in other cases, when withdrawal of the cow's milk is made necessary by any condition, we can use with excellent results the emulsion of either sweet almonds or peanuts, adding farinaceous substances and later gradually increasing amounts of milk with slow transition back to normal diet.

In making up your mind as to using either cream, top, whole or skimmed milk mixtures, one should be governed entirely by the existing conditions, especially of the patient. In the majority of cases the whole milk mixture seems best. Also the breed of the cow or herd producing the milk should be considered for, according to data from the Massachusetts Board of Health laboratories, which have analyzed hundreds of samples from various breeds, the Jersey is ranked first as an all condition milk producer, followed by the Guernsey, Ayrshire, Dutch Belt, Holstein and cross bred cows in the order named. Also use the milk of a herd if possible rather than one cow, unless that cow has been tested and found healthier.

In this connection the following experience of Drs. F. W. Minty and H. M. Freeburg of Rapid City, S. D., may be of interest to some physicians who live in the alfalfa districts. I cannot comment on this because we do not get alfalfa hay in our section.

Is Milk From Alfalfa-Fed Cattle Suitable for Infants?

Dr. F. W. Minty, Rapid City, S. D., in discussing a paper by Dr. H. M. Freeburg upon gastro-intestinal disturbances in children, read before the S. D. State Medical Association and published in *The Journal Lancet*, December 15, 1912, said:

We do not give sufficient attention to the feeding of children. We take something that is intended for an adult and give it to the baby, and we expect a baby to thrive and do well without any further consideration. Now, just a suggestion along that line. We know that a large part of the gastro-intestinal tract of a cow is taken up by the stomach. A cow's milk is intended to absorb slowly in a calf's stomach. Mare's milk is the opposite of this. The colt has a large intestinal tract, and the milk does not curdle. Mother's milk is a happy medium between the two. If we use cow's milk we must take that into consideration. I think we have a practical field for investigation when we are getting so much alfalfa in the milk. Two years ago we had considerable experience in gastro-intestinal troubles. We had between one hundred and two hundred cases of acute enterocolitis, and in spite of all we could do we could not get any good results in these cases. One day I was out in a little shack and I noticed a glass of milk on the window, and at the bottom was a sediment of some whitish stuff, and on top there was a sort of greenish color. I asked the mother

where she got that glass, and she said the milk came from their cow, and she showed me the cow. The cow was then eating alfalfa hay from the stack. I immediately had an inspiration, and I went over town and ordered that all the children that had been given milk from cows fed on alfalfa should not be given any more, but should be given modified milk from cows that had not eaten any alfalfa hay. That was done, and the epidemic cleared up within three weeks. Since then I have watched this condition because I live in a country where alfalfa hay is coming more and more into use. My advice is to take the babies off from alfalfa milk as soon you can, and you will save yourselves lots of trouble.

We also read and hear a great deal of certified milk. There is no doubt of its excellence, but it is impossible to secure this in an ordinary community on account of the complicated technique attached to its production.

An interesting report on immunized milk has been made recently by Rosenberg of New York, in which he asserts that cows which have been immunized by inoculation and vaccination against specific infectious diseases, such as typhoid, tuberculosis, diphtheria, and dysenteries of various forms, produce a milk the feeding of which greatly increases the resistance of the consumer to any of these diseases by causing a partial immunity. I merely mention this because it opens a field of most interesting investigation and far-reaching possibilities.

Frequently, in cases of intestinal disturbances, due to inability of the patient to digest raw milk on account of the casein, I order the feeding of boiled milk. The method of boiling is: Mix your percentage of milk and water together; bring rapidly to a boil, stirring constantly so that no scum forms and boil for three minutes; bottle and cool rapidly, add carbohydrates and feed in percentage of 1-3, 1-2 or 2-3 as required, regularly. On feeding this for some time, the casein curds will disappear and the stools will resume their normal consistency. Another advantage of boiling milk is in destroying the bacteriologic life always found in milk and thereby preventing disease. If the boiled milk diet is kept up over a considerable period, it is well to administer fruit juices to prevent scurvy. The success in feeding the boiled milk lies in the fact that boiling renders the casein much easier digestible.

In connection with casein digestion, a most important point has been reported and demonstrated by Modigliani and Benini. They tested for protective ferments in the blood, using for the tests the serum of rabbits treated by repeated parental injections of cow's milk. Applying this test, they obtained positive response from the serum of bottle-fed infants showing symptoms of gastro-intestinal disturbance from cow's milk. In breast-fed infants the findings were negative. Healthy infants at any age never gave any response. The experiences reported demonstrate the specific nature of the reaction and that the intestines become permeable for casein in abnormal conditions. They suggest, further, that the alien casein, thus getting into the circulation, may do much damage in different ways, especially in the liver. The importance of these findings in cases of toxic conditions of the bowels cannot be overlooked.

In many cases it is absolutely necessary to resort to patent foods for diet, on account of unfavorable conditions either in patient or his surroundings. In this line our task has been made much easier by the discovery of Metchnikoff of the lactic acid bacillus, or, as commonly exploited, the *Bacillus Bulgaricus*.

At birth the alimentary canal is entirely free from bacteria, but in the course of a short time they make their appearance. The character of the organism depends entirely on the food ingested. The intestinal flora of artificially fed babies is much greater than maternally fed. Many of the or-

ganisms found in the intestinal tract are known as beneficent or friendly ones. When diseased conditions arise, these friendly organisms are rapidly destroyed by the invaders. The administration of pure living cultures of *Bacillus Bulgaricus* cause a large amount of acid to be liberated very quickly in the intestines, thus causing beneficial changes in the flora, to the detriment of the growth of the other organisms, especially the putrefactive group. In giving living cultures of *Bacillus Bulgaricus*, it is necessary to also give large amount of carbohydrates in order that they may live and propagate, as they do on this medium, to sufficient strength to destroy the inimical organism. All patent foods contain large percentages of sugar and when it is found necessary to feed any of these foods, most gratifying results are obtained by the administration of *Bacillus Bulgaricus* in connection with them. I make use of *Bacillus Bulgaricus* almost as a routine in practically all cases where it is necessary to feed patent foods and in nearly all cases of gastro-intestinal disturbances due to improper feeding or other causes. Clock, Harrington and others have very interesting reports on the use of *Bacillus Bulgaricus*.

Just a word of caution as to the potency of your cultures. Refer to article of Benedick, Jour. A. M. A., March 6, 1915, for an excellent report on this subject.

In conclusion, study your patient; know him and all conditions relating to him; be clean; be sanitary; be sensible; bestow as much time, thought and study on formulating for him an intelligent plan of feeding as you would on writing him a prescription for medicine that he probably does not need. Too much medicine is given where right feeding is the only treatment indicated, and too few know how to feed in all that the word implies.

TREATMENT OF INFANTILE DIARRHEAS.*

Dr. H. M. Reeder, Asher, Okla.

In taking up the subject of infantile diarrhea, I am not considering the various forms of inflammations of the gastro-intestinal tract as distinguished by the particular part of the alimentary tract involved; neither am I considering the etiology of the various inflammations. As the treatment of all forms is practically the same, it is unnecessary to go into details as regards etiology or pathology. The main thing is the treatment, and it is that phase of the subject which I wish to discuss.

In no other branch of medicine has the physician a wider field in the practice of preventive medicine than in that of the various intestinal complaints of infants. In fact, the proper instructions to the mother is of far greater importance than in knowing how to treat the case after a severe inflammatory process has developed.

The mother should be taught the proper hygiene for the child, not only as to proper bathing, proper clothing, fresh air, etc., but the proper food for the infant and the proper intervals of feeding. She should be taught that an overfed child is really in more danger of gastro-enteric disorders than one that is underfed and that firm, solid flesh is more to be desired than a mass of fat and creases.

One of the first warnings of a disordered digestion is a loose, greenish stool and the mother should be taught that such warning should never be disregarded. A prompt dose of castor oil at such time, followed by judicious feeding, will go a long way toward preventing any further trouble.

While some authorities advise taking off of milk entirely at this time, it has not always seemed necessary to me. Reducing the amount of milk

*Read in Section on Pediatrics, Oklahoma State Medical Association, Bartlesville, May, 1915.

is frequently all that is needed. This is easily accomplished. If a bottle-fed infant, by diluting the contents of the nursing bottle, whether it be modified cow's milk or some of the numerous proprietary infant's foods so widely in use. If a breast-fed infant, the same result is accomplished by giving him a drink of boiled water before each nursing.

The older methods of treating infantile diarrheas I have largely discarded. However, a number of cases have not proved amenable to the newer treatment and it has been necessary to return to that of dieting and purging.

The newer method to which I refer is that of treating diarrhea by intestinal implantation of the *Bacillus lactis bulgaricus*. This treatment was first brought to my attention by an article in the Journal of the American Medical Association, June 29, 1912, by Dr. Ralph Oakley Clock, of New York.

While I did not pay much attention to the article at the time, another article by the same author a year later detailing one hundred and seventeen cases treated by the same method, led me to try that method in my own practice, and, while my results were not as successful as were those reported by Dr. Clock, they were encouraging enough to cause me to adopt that treatment in most of my own cases.

Briefly stated, the *Bacillus lactis bulgaricus* is antagonistic to putrefactive organisms in the intestines and by the implantation of that bacillus in the intestinal canal that tract is rendered sterile.

At first I began the treatment with a preliminary purge, but later discontinued this, as I found results just as good without it. Following the purge, or later, at the commencement of a case, I gave one or two tablets every three hours; in severe cases, one tablet before and after each feeding. The results, where there were favorable results, were almost immediate and extremely gratifying. Vomiting usually ceased about the second day. The stools early became normal in color, though in but few cases could I say with Dr. Clock that there was rapid decrease in the number of stools. However, even where there was no appreciable decrease in the number of stools tenesmus, when present, usually subsided rapidly. With the subsidence of other symptoms, if there was a persistently frequent stool, small doses of Dover's powders, $\frac{1}{4}$ to 1 grain, given after each action until bowels began to check, was usually all that was necessary for that condition. Fever usually subsided early, though in some cases it persisted for five or six days.

Several cases which were uninfluenced by the above mentioned treatment at the beginning, on returning to that treatment after a few days dieting and purging, responded very favorably.

The greatest advantage of this mode of treatment over the older methods is the maintenance of the body strength. There is little or no emaciation and recovery is rapid. In fact, there is sometimes a distinct gain in weight during the illness. Following the older methods of treatment, one had to be very cautious on the return to a full milk diet, but under treatment with the lactic acid bacillus the patient undergoes no change in diet.

Summing up the results in the treatment of infantile diarrheas by intestinal implantation of the *Bacillus lactis bulgaricus*, we are justified in the following conclusions:

1st. Vomiting is early controlled.

2nd. The fever rapidly subsides.

3rd. The stools rapidly return to normal as to color, although the number may not materially lessen until practically all the other symptoms have subsided.

4th. There is seldom any necessity for changing the diet and as the child is still taking his regular food there results little or no emaciation.

Finally, I will say that the above treatment is simpler than any other treatment heretofore inaugurated and is not only extremely practical but scientific. By way of warning, I will add that one should be careful in the selection of cultures of viable bacilli, as tests by the Council of Pharmacy of the American Medical Association have shown that many preparations on the market are practically worthless.

TUBERCULOSIS IN CHILDREN.*

W. A. Fowler, M. D., Oklahoma City, Okla.

To Hamburger, of Vienna, we owe much for our better conception of the nature and the prevalence of tuberculosis in children. Forty per cent of all children are infected with the tubercle bacillus. Nearly all children living with persons with open tuberculosis are infected. A majority of such cases exposed since birth will manifest clinical tuberculosis with a high death rate.

Infection takes place in the vast majority of cases by inhalation, but the alimentary tract and occasionally the skin may be the avenues of infection. The infection starts as a primary ulcer, or area of inflammation, followed by involvement of the adjacent lymphatic glands and, in children, frequently by general distribution through the circulation. This first infection, if it does not prove fatal, produces a degree of immunity and a susceptibility to tuberculin. Other results of this infection are variable. (1) The system may care for the infection without any manifest symptoms; (2) there may be symptoms followed (a) by complete healing, or (b) by some apparent healing followed by recrudescences; (3) there may be general dissemination followed quickly by death. The tendency is for young babies to have rapid general dissemination; for children 3 to 5 years old to have chronic tuberculosis; for older children to resist the infection without symptoms. Of infected children past 7 years of age only 5% have manifest symptoms. The bronchial lymph glands, the lungs, and the mesenteric lymph glands are most often affected, while over one-third of fatal cases show involvement of the meninges.

Diagnosis is the all-important thing in these cases. About this it is not difficult to talk glibly, but it offers one of our most difficult problems because of our inability to elicit a history of the symptoms from the patient and because of the frequency among children of other symptoms due to teething and gastro-intestinal disorders which cloud the symptoms of early tuberculosis. Certainly no short-cut diagnostic methods go as a rule, but these cases require our most painstaking care and, frequently, observations over a period of time.

A careful history is very important. Frequently a careful inquiry into the causes of family deaths will reveal a strong probability of family tuberculosis that might be otherwise overlooked, or the fact that a tubercular family has lived in the house, upon the floor of which the little one has been playing.

The onset is nearly always puzzling. Gastro-intestinal symptoms very often attract our attention; first, because they follow as a result of the illness due to the tubercular infection, or an attack of gastro-enteritis lowers the patient's resistance enough for the tubercular infection to cause the illness. Or it may follow an attack of measles or whooping-cough. The presence of symptoms out of proportion to, or in the absence of apparent

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cause, should make us think strongly of tuberculosis. For instance, the continuance of illness following an attack of stomach and bowel disorder after the stools have become normal in character and number, or following an attack of whooping-cough or measles, should arouse our suspicion. Lymph nodes that are marked but not tender, and emaciation, point to tuberculosis. The fever is not typical and is usually dependent upon secondary infection. A persistent subnormal temperature, especially if very irregular, is suggestive of tuberculosis. The spleen is often enlarged, especially in general tuberculosis. Auscultation and percussion are not so valuable as in adults, as we less often get the gradual development with cavity formation. Signs of cavity and consolidation, and hemoptysis are valuable if present. We may get rough breathing, or tubular breathing, or a prolongation of the expiratory sound, or rales. If these signs are present it is important to note that they are localized, not being common to similar portions of both lungs nor to different parts of the same lung. If the cough is paroxysmal it points to infection of the bronchial lymph nodes. We should also look for infected tonsils, carious teeth and other possible causes of illness. A small empyema or abscess, especially if diaphragmatic or interlobar, may offer serious obstacles to diagnosis. A blood examination is of value in these cases. Focal symptoms, due to tubercles in the brain, and convulsions usually usher in the end.

In all cases where we have reason to expect tuberculosis two specific tests should be made, namely: (1) Looking for the tubercle bacillus, and (2) The tuberculin test.

Finding the tubercle bacillus is much more difficult in children than in adults because here we usually find the closed rather than the open tuberculosis, and because the child swallows the sputum. However, **in every case of suspected tuberculosis we should look for the tubercle bacillus.** A specimen may be secured by tickling the throat with a cotton-wrapped probe to make the patient cough. The sediment from the urine, the feces, and even the stomach contents should be examined for the tubercle bacillus if diagnosis is uncertain without them.

The tuberculin test is specific in 97 to 98 per cent of cases. For the general practitioner the Von Pirquet test is probably the best. A positive reaction means that there is a tuberculous focus in the body, but not necessarily that it is the cause of the symptoms. However, tuberculosis in children is nearly always active. The younger the patient the more probable is tuberculosis the cause of the illness. A negative reaction nearly always means no tuberculosis except in cases of general tuberculosis, tubercular meningitis or a markedly lowered resistance from measles, gastro-enteritis or other causes. This test should not be used in suspected general tuberculosis or tuberculosis of the kidneys.

If the symptoms have warranted a suspicion of tuberculosis, and if we are unable to make a diagnosis after the most painstaking care, we owe it to our patient to insist upon the most careful hygienic measures and to keep the patient under observation until we can dismiss the suspicion.

I shall not discuss the treatment except to say this with reference to prophylaxis: The most important points in this respect are, First, to protect the child constitutionally against infections by proper hygiene and attention to tonsils, adenoids, carious teeth, etc., and Second, To separate the child from the tubercular individual.

I realize that I have only touched this very important subject. If what I have said may result in a more careful attitude toward this condition its purpose shall have been fulfilled.

TUBERCULOSIS.*

H. C. Childs, M. D., Tulsa, Okla.

History: Tuberculosis is one of the oldest diseases of which we have any authentic history. Hippocrates and Galen both recognized the pathological and clinical symptoms. From the early part of the 16th century, its contagious nature was recognized.

Etiology: The true etiology was not known until 1881, when Dr. Robert Koch announced his discovery of the bacillus tuberculosis which is necessarily the primary etiologic factor.

There are three important secondary considerations in the causation of this disease, viz: **the type of germ, the individual and the route by which the germ reaches the site of development.**

There are several types of both human and bovine bacilli and these several types differ in their clinical manifestations.

The morphology differs slightly in both human and bovine specie. Whether the different types of germs are due to evolutionary causes or not, we have no positive evidence. Personally I think it is. We do know that by transplanting the germ from one animal to another that it becomes more or less virulent. This can be accounted for in many cases by the fact that some animals are more susceptible to infection from tuberculosis than others, but my observation and experiments have convinced me that there are some strains of both human and bovine tubercular bacilli which are more virulent than others. It is a fact that human bacilli can be transplanted to many other animals in food, drink or otherwise. Dr. Anders has shown that tuberculosis among cattle on the Western plains has increased to an alarming degree in the last 20 years; due to infected human beings in the East migrating to the plains and depositing sputum and fecal matter on the grass, which is later eaten by the cattle.

As noted above, certain human individuals and animals alike are more susceptible to infection and less resistant to the disease than others. The younger the animal the more susceptible to infection. This is even more marked in human beings.

Route by Which the Germ Reaches the Site of Development.

There are two important portals by which this **Red Demon** enters the system—the respiratory and digestive apparatus. There are other routes by which infection may and does gain entrance, but they are of so little consequence comparatively that we shall not mention them here. It is now a noted fact that at least 90% of all individuals are infected at some time in life. Eighty-three per cent of this number survive the infection, leaving 7% of all deaths directly due to tuberculosis.

We are surprised to find such a great number of very young infants showing unmistakable evidences of tuberculosis. The principal source of infection, without a doubt, is through the milk supply and hence is bovine. The principal site of election by the germ in children is in the cervical lymphatics and the joints and bones. Joints about the synovia are very easily infected through the blood or lymph supply, while the bone when healthy is very difficult to infect, and where such infection does take place it is secondary.

In view of the above facts, it behooves us to look critically into the source of our milk supply. It has been found that 62% of all cases of infection is due to bovine origin. In a careful examination of the milk supply

*Read at Bartlesville Meeting, Oklahoma State Medical Association, May, 1915.

of several cities it has been found that at least 16% per cent of all samples examined were infected with tubercule bacilli.

Another frequent source of food contamination is by cooks and waitresses. Dr. Anders has traced the source of infection of three young internes in the Philadelphia General Hospital to a negro cook.

We find that when in ordinary conversation there is emitted a fine spray of saliva which in a tubercular will infect culture media 24 to 36 inches from the speaker. Coughing and sneezing is very much more dangerous. In view of the above facts, which are unquestionable, we should exercise no little degree of carefulness in selecting household servants.

It is a well known fact that the negro race is much more susceptible than the white and, therefore, relatively a greater number are infected among that race.

A frequent and very dangerous source of infection is among school children where pencils and other common utensils are borrowed and loaned freely. It would seem a step in the right direction to impress the teacher with such dangerous practice and as a measure of prevention to get her co-operation.

The respiratory route is the next one of importance and one that should claim much of our serious consideration. There are many of the laity who do not know nor have never been told that consumption is infectious and necessarily do not take any precaution at all, hence some campaign of instruction should be instituted. Infected, dust-laden air is the vehicle of conveyance by which the tubercular bacilli gain entrance to the site of development. It is not practical to make laws against promiscuous spitting, as previous experience has shown, but a more liberal education along the line of sanitation would do much good.

Heredity: Hereditary transmission is extremely rare, although it does occur. Many of the laity think this the only way tuberculosis can be transmitted, and this fallacy alone is responsible for a great deal of their negligence. I know of no disease more certain to spread through proper contact. Cornet found, out of 100 deaths among nurses, that 63 died of tuberculosis.

I have known a father who was infected to raise a large family, infect them all and subsequently all died, he being the last to go. I have a record of another man 40 years of age with tuberculosis who married a young woman of 20 who very soon contracted the same disease and died. This man lived on for several years and married twice more; both women contracted the disease and died subsequently. It is common knowledge among doctors that a wife will infect a husband and vice versa. These facts show that we are more liable to infection through close contact.

Environments: Patients infected with tuberculosis bear a certain ratio to environment. It has been designated, a "house disease." Sedentary habits, little or no sunlight, bad air and worst of all, inhalation of irritating gases, fumes and dust.

I believe there are a greater number of infections among stone-cutters and coal-diggers than any other occupation that I know of. A reduced state of health from other diseases predisposes to tuberculosis. Kemp reports 23% of all his cases of gastric and duodenal ulcers as finally dying of tuberculosis.

Immunity: A certain degree of immunity is congenitally acquired by many in tuberculosis as it is in some other diseases. These facts were not definitely known until a few years ago, when Dr. Karl Von Ruck was able to show the presence of antibodies in the blood.

The antibodies found in young infants, both human and bovine, whose mothers were known to be infected, are identical with those found in the blood after active immunization, brought about by parental introduction of the bacterial virus in an attenuated form. To what degree this immunity can be induced has not been definitely determined, but it seems reasonable that complete immunity might be acquired.

The belief that a certain degree of immunity is congenitally acquired is strengthened by the fact that new races are so susceptible, notably the American Indian and the Negro race. The Jews, one of the oldest races of which we have any history, are markedly free from tuberculosis.

I believe the reason why young children are more susceptible to infection from tuberculosis and other diseases is because they are gradually sensitized, which sensitization produces antibodies and hence a degree of immunity which is dependent upon:

First: The degree of congenital immunity;

Second: The amount of virus;

Third: The frequency of contact.

Diagnosis: Diagnosis is one of the most important steps with which we have to deal, as the success of our therapeutic endeavor depends largely upon an early recognition of the disease and the application of indicated remedies thereof. For several years I have given considerable credence to the epidermal reaction of tuberculin proposed by Von Pirquet. Many physicians of considerable authority give no credit to this proposed diagnostic sign unless it be negative. I consider it one of the most valuable symptoms which we have to lead us to an early diagnosis. It is stated by authority that 60% of all seemingly healthy individuals show a positive reaction to this test. I have tried it out for five years and my findings have been far from that. In fact, I have not found one who reacted positively who did not show other unmistakable evidences of tuberculosis. It will not show positive in far advanced stages of either pulmonary or military tuberculosis.

The endermal test, which depends upon both epidermal and constitutional reaction, is of equal importance; each has its place in selected cases. There are other tuberculin tests but those mentioned will suffice.

Pathology: When the tubercular bacillus lodges on a favorable site of development, which must be broken integument, mucous or serous membrane, nature begins at once to defend herself by sending out its natural defenders—the leukocytes, which pile up around the enemy, constituting the well known tubercle. Other important pathological changes take place which vary accordingly to the individual case, but all seem to be a part of nature's effort to defend herself. The tubercle later undergoes one of two important changes, viz: Caseation or calcification. Frequently both changes take place in the same tubercle and seemingly at the same time. Usually, however, calcification is a subsequent change.

The tubercle bacillus, during its life cycle, secretes metabolic products which are toxic and which when taken up by the tissues of the body must be neutralized by antitoxic substances manufactured by the body economy. This toxic substance or tuberculin is a protein poison whose chief principal is a peptone.

Just what special organs are concerned in the manufacture of this antituberculin we cannot definitely state, but it is highly probable that the blood-making organs are vitally concerned. When infection takes place the lymphocytes seem to increase immediately, which is one of the very essential steps on the part of nature to protect herself.

The lymphocytes seem to carry a lipolytic ferment which dissolves the fatty capsule surrounding the tubercular bacillus, after which the neutrophils, conveying a bacteriolytic ferment, carry on a process known as phagocytosis. The tubercule bacillus itself which, when broken up by the bacteriolytic ferment, like the metabolic products of its life cycle, consists of several constituents each of which has to be neutralized by its specific amboceptor.

To make ourselves well understood, it will not be out of place to mention here what we really mean by phagocytosis and amboceptors: By chemotaxis the lymphocytes are actually drawn to the site of infection, and by the action of their specific ferment allow through this same chemotaxis, or chemical affinity, the neutrophils bearing their specific ferment to bring into solution the tubercule bacillus. The bacillus, or its toxic products, when in solution, stimulates the production of antibodies or amboceptors.

For two years I have kept a close watch on the blood of my tubercular patients and have been able to predict favorable or unfavorable changes with a considerable degree of accuracy. This is more marked, however, in children, especially those showing evidences of lymphoid infection. An increase in the lymphocytes is more marked than that of the neutrophils.

If the above conclusions are facts, as I think they are, it would seem rational to administer some remedy to increase leucocytosis and especially the lymphocytes.

Treatment: There is no specific treatment for tuberculosis and during the course of the disease many therapeutic agencies may be indicated. Conservation of energy is one of the most essential requirements. Complete rest can only be maintained by placing the patient in bed and keeping him there. This applies more specifically to those who are running a temperature. It is a serious mistake to allow patients to resume their former business pursuits or any other occupation which in the least taxes their stored-up energy until recovery is assured.

The next consideration, after conservation of energy, is to make more energy. The source of all muscular and nervous energy is **food**. Therefore, food becomes second only in the management of this disease. We should direct the patient to take a certain definite quantity of food daily. However, the patient's feeling must be reckoned with in every case. In this matter, co-operation with the patient is of paramount importance.

I see no advantage one kind of food has over another. We must have a well balanced ration. The very irrational idea that some doctors have relative to the superior value of eggs and milk in this disease is preposterous.

For some time I have been feeding my patients by the caloric value of food, and to simplify the matter I have devised a chart which measures the food per spoonful and per calory. By this simple method I can keep in close touch with the amount and kind of food taken daily. An adult will take, in ordinary health, 2,000 calories of food daily. By keeping the excretory organs in good condition, so the metabolic products of digestion may be detoxicated, we can push food to super-alimentation and store up a certain amount of energy which may be drawn on as needed to fight the disease.

STANDARD PORTIONS.

Each article mentioned contains, approximately, 100 calories per measure.

	Breakfast	Dinner	Supper
Apple, baked, one medium sized.....	-----	-----	-----
Apricots (pulp) one flat tablespoonful.....	-----	-----	-----
Bacon, two medium slices.....	-----	-----	-----
Beef (roast) thin slice 2 x 2 in.	-----	-----	-----
Bread (baker's) 1½ large slices.....	-----	-----	-----
Butter, one average "pat." 1 in. sq.	-----	-----	-----
Cream Cheese, 2 in. cube.....	-----	-----	-----
Chicken, ave. serv. portion, 2nd joint or wing and breast	-----	-----	-----
Corn (stewed) two heaping tablespoonsful.....	-----	-----	-----
Cream, 1½ ounces, 20 per cent.	-----	-----	-----
Custard (boiled) 2½ tablespoonsful	-----	-----	-----
Eggs { Two small, 1½ large	-----	-----	-----
{ Whites, 5	-----	-----	-----
{ Yolks, 2½	-----	-----	-----
Ice Cream, 2 heaping tablespoonsful.....	-----	-----	-----
Jelly Wine, 3 average tablespoonsful.....	-----	-----	-----
Buttermilk, 8 ounces.....	-----	-----	-----
Milk (whole), 5 ounces.....	-----	-----	-----
Oatmeal, 2½ heaping tablespoonsful.....	-----	-----	-----
Potatoes (mashed), 1½ heaping tablespoonfuls	-----	-----	-----
Prunes (stewed), 2 medium sized.....	-----	-----	-----
Soups { Cream Celery, about 7 ounces.....	-----	-----	-----
{ Pea, about 5 ounces.....	-----	-----	-----
{ Vegetable, about 10 ounces.....	-----	-----	-----
Spinach, 2 heaping tablespoonsful.....	-----	-----	-----
Sugar, 6 level tablespoonsful.....	-----	-----	-----
Grape Juice, 5 ounces.....	-----	-----	-----
Apple Sauce, 4 average tablespoonsful.....	-----	-----	-----
Beets, 5 average slices.....	-----	-----	-----
Celery, one-half medium bunch.....	-----	-----	-----
Chop (lamb), one average.....	-----	-----	-----
Corn Bread, square 1 x 1 x ½ in.	-----	-----	-----
Corn Starch Pudding, 1 scant tablespoonful	-----	-----	-----
Hash (corned beef) 1½ heaping tablespoonsful.....	-----	-----	-----
Hominy, 2 heaping tablespoonsful.....	-----	-----	-----
Beans or Peas, 1 heaping tablespoonful.....	-----	-----	-----
Lactose, 1½ average tablespoonsful.....	-----	-----	-----
Lamb (roast) thin slice 2 x 3 in.	-----	-----	-----
Onions (boiled), 5 small.....	-----	-----	-----
Oranges, 2 very small or 1 medium.....	-----	-----	-----
Total.....	-----	-----	-----
Grand Total.....	-----	-----	-----

The average adult will consume about 2000 calories daily.

N. B.—The above ruling is for one day only, but can be made for any number of days or weeks desired; also the number of articles of diet can be increased.

Fresh Air and Sunshine: The value of fresh air and sunlight has long been known and, fortunately, nature has abundantly supplied every community. There are a few places in the United States which seem to be especially favored with this product. A great majority of tuberculous are poor people who can ill afford this **luxury** which is very much overestimated.

A patient can be treated at home and among his friends at a minimum cost. The erroneous idea among the laity, and even some physicians, that climate alone will cure tuberculosis, is a sad mistake indeed. Wherever one is acclimated, surrounded by his family and friends, he has relatively a better chance of recovery than to move away from such influences. I know of nothing more certain to mar the appetite and hence a loss of energy than home-sickness.

Medicine: There are but few medicines which have any specific value in tuberculosis. Tuberculin is a very valuable remedy when properly applied in selected cases. It must be highly diluted and cautiously administered. I have used several preparations, but have gotten the best results from Koch's Bacilli Emulsion, until a few months ago when I began to use Dr. Karl Von Ruck's Tubercular Vaccine. It is too early to draw conclusions from my own use of this preparation, but if we can give any credit to him and his co-workers it certainly is a better preparation than I have hitherto used.

Creosote: Creosote has been a popular remedy with physicians for many years in pulmonary tuberculosis. It formerly was given for its antiseptic properties, but since it has been shown that it has no such effect on the tubercle bacillus, it is no longer given from that viewpoint. It does have a value from a clinical aspect which I think is due to an irritation produced at the point of elimination, which is the urinary and respiratory tract. In consequence of such irritation, there follows a hyperleukocytosis. This drug, undoubtedly, has other therapeutic properties much indicated in phthisis pulmonalis. It augments the formation of antibodies and from a close study of its action I know of no single remedy more certain to stimulate the production of hydrochloric acid, so often deficient in these cases.

Iodine: Iodine is another drug of especial importance in this disease. It seems to have a special affinity for all lymphoid tissue, and, as the lymphocytes are given birth in the lymph glands, it would seem that iodine deserves an important place in the therapeutic armamentarium of tuberculosis.

Tubercular tissue seems to possess a selective action for iodine which does not directly depend upon its being conveyed to the site of election by the blood or lymph channels. This only makes it the more valuable, since nature's first effort is to exclude the tubercular process from the general circulation. The form of iodine one would naturally want to select would be one which would set free the most iodine with the least irritation, or iodism. Where there is a disposition to hemorrhages, iodine is contraindicated, owing to its solvent qualities; it removes tubercles supporting the walls of important blood vessels.

Complications: There are complications which call for special drug medication and management. Hemorrhage is one of the most serious complications with which we have to deal. There is no drug which has any special action in hemorrhage of lung tissue. The practice of giving Styp-tics, Ergot and Adrenalin Chloride is worse than nothing.

The patient should be put to bed and remedies administered calculated to lower blood pressure. Nervousness and fright calls for special medication. Morphia is the best.



CLINICAL SOCIETY OF ST. ANTHONY'S HOSPITAL, OKLAHOMA CITY.

Dr. A. W. White, President. Dr. L. J. Moorman, Secretary.

By Dr. Leila Andrews.

Mrs. E. C., age 63; a widow and housekeeper. Born in Switzerland; the second of thirteen children; was strong and robust as a child, and has nothing of interest in either her family or personal history.

She was married at twenty, has six children, all living and well. Her pregnancies and labors were uneventful. She was never troubled with sore throat, but during her middle life began to have trouble with her teeth. About ten years ago she had all of her upper teeth pulled, and was fitted with a plate. Last June she had her lower teeth pulled and had a plate. About twelve years ago she began having pains in the epigastrium, which usually came on at night. This pain varied from sharp to dull, and radiated to either shoulder, and sometimes her neck. She found that by taking one-half teaspoonful soda in a little hot water she could get relief. These attacks of pain have not increased in severity or frequency. Sometimes there are intervals of several weeks, during which time she is not troubled with pain, soreness or gas in the stomach or bowels. She has never been nauseated, and has never vomited.

Her bowels have been normal, so far as she has known, but since examining the stools since under my observation, she says they are light brown in color.

In 1912 she noticed that she was passing more urine than usual, and in January, 1913, consulted a physician on account of a troublesome pruritis vulvae. The urine was examined at that time, and she was told that she had diabetes. A rigid withdrawal of the sugars and starches and an ointment he prescribed entirely relieved the pruritis. Since then her urine has decreased in amount, and she has lost about forty pounds in weight.

On December 22nd she slipped on an icy board and fell, striking her right elbow. She suffered great pain on motion at the shoulder, but there was no swelling or discoloration. There has been a persistent pain and restriction of motion of the shoulder, especially on abduction.

She consulted me three weeks ago on account of a very severe headache, which had been continuous day and night for about a month. She described it as throbbing, synchronous with her heart beats, and involving the whole upper part of head, the upper maxilla.

The patient weighs 204 pounds, is short and quite obese. She has a florid complexion. Her temperature is normal, pulse 76, blood pressure three weeks ago was S. 215 and D. 180; today it is S. 160 and D. 145.

She shows a general arteriosclerosis of all the palpable arteries. The heart itself is negative, likewise the lungs. Her abdomen is negative, in so far as it is possible to palpate her, on account of the large amount of fat. She is tender over the epigastrium.

Dr. Davis reports upon examination of her eyes that aside from slight error of refraction, and a general haziness of the fundi, there is nothing abnormal.

The laboratory findings show the following: Urinalysis Amt. 24 hours, 5 quarts; S. G. 1012 acid reaction; no albumen; $3\frac{3}{4}$ tenths % sugar; no bile; decreased indican; a few hyalin casts; a few red and white blood cells; some motile bacteria, and some squamous epithelium.

A differential blood count revealed nothing of interest. An examination of the stool when on ordinary diet showed a rather light colored stool, containing $\frac{7}{8}$ % neutral fats and fatty acids, which Dr. Sorgatz tells us is nearly normal.

The X-ray picture of her shoulder is interesting from a clinical standpoint, in the absence of either a fracture or a dislocation. Dr. Hull, who examined the patient today, will discuss this feature of the case.

We have here, then, a woman who has suffered for a number of years with a disturbance of a part of her intestinal tract. Whether her trouble has been of the pancreas, the intestine, gall bladder, and liver, and this has been responsible for this very slight diabetes, I do not know.

She has been suffering acutely from this high blood pressure, no doubt on account of kidney changes that have been going on. She has been on ordinary diet, and for three weeks has taken nothing but saturated solution of magnesium sulphate. Her headache has diminished until she is now fairly comfortable.

Discussion by Dr. Hull.

At the request of Dr. Andrews this morning I examined this patient's right shoulder. This trouble dates from two falls received on successive days several months ago. Patient states that each time she struck on the right elbow and shoulder. Considerable pain and soreness followed, but she continued to use the joint in her housework. She has been unable to obtain full range of motion in it and is unable to raise the arm above her head. A close examination shows it to be limited in its range of motion and especially in abduction and outward rotation. All attempts of motion in these directions are positively limited and productive of considerable pain. General appearance of the shoulder is normal. Some atrophy is noticeable. Deep palpation reveals one point of tenderness over the apex and beneath the deltoid muscle, or directly over the sub-deltoid bursa. The X-ray plate taken this morning is of no assistance to us in diagnosis, for it reveals nothing abnormal. From the history, course of the trouble, and examination, I believe that the diagnosis of sub-deltoid and sub-acromial bursitis can properly be made. Such cases have formerly been classed as peri-arthritis of the shoulder, or "rheumatism". We now know that they are due to inflammation and inflammatory changes in these bursa with the formation of adhesions and even calcification. Treatment of these conditions in the early or acute stages is rest; in subacute or later stages massage, super-heated air, active and passive motion, and in resistant and persistent cases, removal of the bursae.

Dr. John F. Kuhn presented the following case: Name: Mrs. H. S. Born in Missouri; aged 60; married; mother died at the age of 75; cause unknown; father died at age of 75, from some form of heart disease. One brother and one sister living, in good health. One sister died at the age of 30 after an illness of several weeks, cause unknown.

Previous history: Patient has always enjoyed excellent health with the exception of occasional attacks of malaria. About a year ago noticed a lump in the right breast, which seemed to cause slight, shooting pains. The growth was very slow, but she was alarmed at the possibility of cancer, so she consulted a physician, who confirmed her suspicions and advised her that it could be removed by applying a plaster. Desiring further advice she went to Kansas City and consulted a "specialist" who also advised the application of some plaster.

From Kansas City she came to this city and consulted "Dr." Needham, "cancer specialist," who began treatment by applying some caustic paste. At this time the growth was small, hard and painless, and not open. Soon after the treatment began the growth commenced to increase rapidly in size, and sloughing of the superficial tissues was extensive. The tumor itself, however, remained and at present is an open, ulcerated, exuberant mass about four and a half inches in each diameter, exuding large

quantities of foul, highly offensive pus. She has been under the present treatment about three months. The patient's right knee is the seat of a large growth which is probably metastatic carcinoma.

Physical Examination: Patient well nourished; shows a large open mass in the right breast, numerous skin scars over breast and in axilla. The mass bleeds easily and is covered with a foul thick pus. Mentally, there is great depression. Digestive system, comparatively normal. Respiratory system, normal. Circulatory system, vessels slightly atheromatous. Genito-urinary system, negative.

Laboratory findings by Dr. Sorgatz: Scirrhus carcinoma.

Dr. Antonio D. Young reported two cases of typhoid fever in brothers. The wife of one was a patient in St. Anthony's hospital last fall. She also had typhoid fever. At the end of the second week both patients had a negative Widal, and the blood showed many malarial plasmodia. The third week one patient showed a positive Widal, while the other was still negative. The one having a positive Widal had numerous rose-colored spots. In both cases the other clinical signs were not marked. Dr. Young thought that both cases were typhoid, notwithstanding the laboratory findings. Fifteen grains of quinine in solution failed to influence the disease. The leucocyte count was 6200.

A RATIONAL TREATMENT FOR HAY FEVER.

Vasomotor rhinitis, or hay fever, is very generally recognized as a neurosis in which the morbid cycle is the irritation of a hyper-sensitive area in the nasal chamber by a foreign particle, the dilatation of the local capillaries, and turgescence of the turbinal tissues, accompanied by a catarrhal inflammation of the nasal mucous membrane. When the affection has declared itself and the patient is suffering more or less acutely from its ravages, manifestly there is need of prompt and effective treatment.

The suprarenal substance in the form of its isolated active principle, Adrenalin, is undoubtedly one of the very best of remedial agents at this critical juncture. While not a specific in the strict meaning of the word, it controls the symptoms.

The suprarenal substance in the form of its isolated active principle, Adrenalin, Chloride Solution and Adrenalin Inhalant are the preparations most commonly used. The first mentioned should be diluted with four to five times its volume of physiologic salt solution, the latter with three to four times its volume of olive oil. The medicament is applied in spray form to the nares and pharynx. Any good atomizer adapted to the use of oily or aqueous substances is suitably employed.

NONSUPPURATIVE SUBPHRENIC PERITONITIS.

A claim of priority in the description of a not uncommon complication of appendicitis as well as other diseases of the viscera is made by Harold Neuhof, New York (Journal A. M. A., July 17, 1915). He refers to an article by himself in Surgery, Gynecology and Obstetrics for March, 1912. The pathologic and clinical entity referred to and there described is, he claims, the same as the one recently described by R. I. Lee in the Journal A. M. A., April 17, 1915. That such a clinical picture could occur has apparently been almost entirely overlooked. Neuhof's own paper dealt with the condition only as a complication of appendicitis, the most frequently observed cause. At the time it was published the only actual proofs of the existence of the subphrenic inflammation were an exudate over the superior surface of the liver, seen at a laparotomy in one case and dense inflammatory tissue between the liver and the ballooned diaphragm encountered in an exploratory operation in another case, also resistance to the aspirating needle and withdrawal of small amounts of clear fluid in several others. Since then he has had the opportunity of seeing a postmortem of a patient dying after a subphrenic peritonitis due to a diseased gallbladder. A description of a typical case is given and the symptoms are compared with those of Lee's four cases. Lee's contribution is of distinct value in the presentation of more clean cut physical signs and the demonstration that more obscure foci than a diseased appendix, gallbladder, etc., may be the source of the infection. The clinical pictures of the groups of cases, however, are identical.

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DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POSTOFFICE AT MUSKOGEE, OKLAHOMA AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL

NATIONAL LEGISLATION AND THE PUBLIC HEALTH.

Are we to have a revolution of sentiment and laws with reference to interference by the National Government in public health matters as affecting states? It would seem that this much desired common-sense condition, after years of battering at the gates, is about to become a reality. In the passage of the National Antinarcotic Law, the Government seems to have taken a long step along that line. Heretofore, whenever organizations actuated by the highest altruistic motives have approached Congress with a plea that some law National in scope be enacted looking to public health betterment, they have been met with the argument of their opponents and the excuses of the pliable congressmen that the law was an interference with the police power of states; that such matters were the concern only of localities and not the nation at large. In essence, there should be one sort of law for Arkansas, another for Kansas and another for Oklahoma, in order to properly handle contagion and infection dangerous to the public health.

The same congressmen, of course, used the same argument to prevent the Constitutional Amendment looking to the suppression of the liquor traffic. With them the end to be attained made no impression. The revered Constitution, written a hundred years ago, was a bulwark, now to be invoked in the interests of liquor and the continuation of a state of foolish administration of impotent laws, best described as assinine.

It seems the Constitution was forgotten in the consideration of the Antinarcotic Law. The states were not consulted about it. May we hope that they will keep right along on their road of irreverent disregard until we have similar laws affecting measles, meningitis, typhoid, tuberculosis, quarantine, the practice of medicine, the standard of foods, etc., from one end of the Union to the other. No one with any practical sense will object

to California, Florida, Maine and Texas being required to perform the same identical acts under certain conditions, and it is in this manner only will we ever have a diminution of infection, poverty and death rate in keeping with our rights.

THE FEDERAL ANTINARCOTIC LAW.

This law, familiarly known to physicians as the Harrison Bill, went into effect March first, and, as was to be expected, owing to different interpretations of its terms, has been productive of much discussion pro and con. The gist of most of the comment may be divided into the following classes:

First: A general objection on the ground that it attempted to interfere with the proper functions of the physician in suggesting, at least, the manner in which he should prescribe a drug. It is fair to say here that the same objection would probably be brought forth had the law applied to any drug other than narcotics. It is simply the natural culmination of thought as to the personal liberty of the individual under his constitutional rights. He has always thought that he should be allowed to use his own best personal judgment as to the needs of his patient, free and untrammelled by any restrictions. For this reason the last suggestion of the Department: "Therefore, where a physician, dentist or veterinarian prescribes any of the aforesaid drugs in a quantity more than is apparently necessary to meet the immediate needs of a patient in the ordinary case, or where it is for the treatment of an addict or habitue to effect a cure, or for a patient suffering from an incurable or chronic disease, such physician * * * should indicate on the prescription the purpose for which the unusual quantity of the drug so prescribed is to be used. In cases of treatment of addicts, these prescriptions should show good faith of the physician in the legitimate practice of his profession by a decreasing dosage or reduction of the quantity from time to time, while, on the other hand, in cases of chronic or incurable diseases, such prescriptions might show an increased dosage or increased quantity."

This ruling has provoked some caustic comment. One Journal suggests that such a message would never have been penned had the enforcement of the law been placed in the hands of scientists—that is, the United States Public Health Service instead of the Revenue Department. It suggests that medical men know what a layman might not be expected to know, that "the breaking of an opium addiction can not be accomplished in this way."

Probably more resentment will be felt should the Department see fit to inquire more closely into the merits of each case, where the officer might feel that in that particular case the law was possibly not being observed in good faith. In this connection it is well to remember that the law is new, that no law is ever popular to everybody, that aside from an occasional discommoding of physician or patient in the filling of a prescription that it has not worked any particular hardship on any of us. It has caused the dispensing physician more trouble, no doubt, than the having and handling of the drugs is worth. The suggestion in the ruling of May that under certain suspicions on the part of the druggist, refusal to fill prescriptions should be made, is rather strong, and will possibly cause trouble for the druggist who should refuse to fill one written in good faith, simply because he might think it unnecessary or the quantity too large. This comes from entrusting a partial enforcement of the law to one not competent to judge of the necessities of the occasion. No one but the physician himself is competent to pass intelligently on the needs of his

patient. In this connection it is well too to remember that the above is the result of a ruling which, while the law allows, is subject to modification at any time, and in case of serious question in any court might be set aside or modified. For this reason a court might construe the law as it is written and not follow a ruling of the Commissioner.

Second: It was supposed that there was an alarming number of drug habitues in the United States, especially in the large centers of population. An analysis of conditions, so far observed throughout the country, does not bear out the supposition. In Ohio it is intimated that the law has been a lamentable failure in the respect that it has not disclosed any material number of cases and that practically the law was unnecessary, only going to show the possible effect of hysteria misplaced or "phobia" on a certain subject.

Third: There is a general tendency, and this seems to be in the majority, to admit the shortcomings of the law, but realizing the ends sought to be accomplished, to aid it by every moral and personal aid. These opinions are apparently right, where, as a rule, the profession will always be found, and take the position that the "end justifies the means."

A WORD ABOUT MEDICAL DEFENSE.

As there seems to be, in a few instances, misunderstanding about the scope of medical defense our association is about to undertake, a few remarks may aid in clearing up some phases of the matter.

It should be understood that the circular sent each member late in June is more or less a composite one made up from those of other states and made as nearly as could be applicable to our state. The Arizona plan, the last adopted before ours, was largely drawn from for the reason that it embodied much of the experience of all others heretofore organized.

The fact that this system of defense has been in successful operation in every state that has adopted it for a term of years, and that nowhere is there a disposition to do without it after a trial, should be borne in mind. It should also be remembered that many of the old indemnifying companies formerly writing such insurance have withdrawn their policies and write them no more. This is significant and may eventually mean that the plan we are adopting with modifications to meet demands and unforeseen exigencies will be the only means of defense against these unjust suits. A raise from \$15.00 to \$25.00 recently in cost should not be overlooked.

The idea in the minds of some men that they will not be made the victims of such actions, that it will always be the other fellow, is a fallacy not born of experience of study of the situation, for it is a fact that a suit is rarely brought against a man not worth while. On the other hand a moment's study of the cases show that in nearly every instance suit has been brought against men far above the average in mental equipment and ability to use such equipment. Another and most pressing reason for united defense, which should appeal to every physician, is the fact that any pauper may file a suit on the most absurd grounds and use it with the aid of unscrupulous attorneys to harrass the physician into an unjust settlement of a more unjust cause. The physician must not only employ attorneys at his own expense, but must also go to great pains and expense to meet possible contingencies. It is a rule with indemnifying companies to suggest a settlement of these cases for a small sum which, if accepted, only paves the way for similar suits and encourages them on the flimsiest pretenses.

It is an unpleasant admission, but it is said that nearly every case has in the background some physician usually prompted by jealousy or a desire to embarrass his fellow practitioner. One prominent Oklahoma City sur-

geon states that in every case some physician has either directly inspired the suit or has by some "loose-mouthed" unguarded statement caused it. A great deal of this will be avoided when it is understood that the defense will come from a united source and that the interests of the physician, so long as he is in the right, will be protected by an organization who will make it a business to see that he is not imposed upon.

We are certainly in an unfortunate plight. The lawyers on one side of every case lose, yet we so rarely hear of a suit for malpractice against a lawyer that it is a curiosity, while the physician who deals with death daily is comparatively the constant victim of them. The reason of this lies in the fact that lawyers meet and discuss their cases from the initiation face to face. If one advises suit he must back up his judgment by statements in open court, while with physicians the unguarded word, the vicious dig behind the unsuspecting physician's back, may set in motion months of trouble and worry which, without reference to the outcome, nearly always in his favor, is still his distinct loss.

PERSONAL AND GENERAL NEWS

Dr. J. M. Williams, Wagoner, has moved to Norman.

Dr. C. M. Compton, Coyle, has moved to Drumwright.

Dr. R. K. Goddard, Supply, is taking his vacation in Texas.

Dr. J. W. Gray, Quinton, is in Chicago taking in the clinics.

Dr. P. J. Hampton, Rush Springs, is visiting in San Francisco.

Dr. Forrest S. King, formerly of Pryor, has located in Muskogee.

Dr. L. T. Lancaster, Cherokee, visited the San Francisco Exposition.

Dr. R. W. Holbroke, Perkins, is visiting the San Francisco Exposition.

Dr. C. H. Lockwood, Medford, is doing postgraduate work in Chicago.

Dr. M. Van Matre, Keota, visited the San Francisco Exposition in June.

Dr. A. B. Cullum, Hennessey, spent June in Chicago for postgraduate work.

Dr. J. A. Hatchett, El Reno, spent May and June in New York City doing special work.

Dr. J. G. Martin, Durant, is under arrest charged with practicing medicine without a license.

Dr. C. D. Simmons, Orlando, has been appointed physician to the A. and M. College at Stillwater.

Dr. H. A. Lile, Aline, announces the letting of a contract for a new hospital building on August 1st.

Dr. E. C. Gooch, Lawton, recently suffered a severe attack of blood poisoning due to an infected finger.

Dr. and Mrs. John L. Sims, Weleetka, announce the recent arrival of little Miss Hazeltine Judson Sims.

Dr. J. M. Workman, Woodward, who recently underwent an operation, is reported as rapidly recovering.

Dr. D. D. Howell, Nowata, has joined the inventor class, having perfected an improved hypodermic syringe.

Dr. L. H. Huffman, Hobart, announces the reopening of the Hobart Hospital, which has been undergoing repairs.

Dr. Fowler Border, Mangum, who visited the New York clinics in June, is confined to his bed with an attack of fever.

The **Ft. Sill Indian Hospital** is announced ready for occupancy. It will be a general hospital open to all classes of cases.

Dr. F. W. Ewing, formerly of Terrall, but who has spent several years in Washington, D. C., has located in Muskogee.

The **Physicians and Surgeons Hospital**, Muskogee, held commencement exercises July 15. A class of six was graduated.

Dr. G. H. Butler, Tulsa, announces that his reported removal from that place to Page was an error—that he was temporarily absent only.

The Medical Association of the Southwest announces its preliminary program for the annual meeting in Oklahoma City, October 12 and 13.

Dr. W. G. Brymer, Dewar, accompanied by his family, are touring the country by automobile. Colorado is their final destination for the summer.

Dr. John A. Brooke, formerly House Surgeon in the Hospital for Ruptured and Crippled, New York City, is associated with **Dr. Robert L. Hull**, Oklahoma City.

Dr. E. E. Norvell, Wynnewood, had a narrow escape from serious injury when his car struck a stump. Flying glass slightly injured several occupants of the car.

Dr. Jas. H. Crouch, Oklahoma City, who was on trial charged with performing a criminal operation on Mary Simmons, is to be retried immediately, the first trial resulting in a disagreement of the jury.

The Medical Defense Committee of the council announce that no selection of a permanent attorney for the association has been made and that all applicants will be carefully considered before final action is taken.

Dr. D. A. Myers, Lawton, is "getting his" in large chunks. His last successful attempt in the injury line netted him a badly mashed thumb. This time the combined efforts of an automobile and horse caused the trouble.

McIntosh County Medical Society held its monthly meeting in Eufaula July 13. Program: "Trachoma Clinic," **Dr. W. B. Newton**, Muskogee; "Infantile Diarrhoea," a general discussion opened by **Dr. J. F. Rice**, Eufaula; "Medical Ethics," **Dr. B. J. Vance**, Checotah. This was followed by a general clinic.

Dr. W. Albert Cook, Tulsa, who in addition to numerous other accomplishments, is a golfer of no mean attainments, came marching home from San Francisco the proud possessor of a trophy in the way of a cup, which is of very high value intrinsically as well as on account of the memories surrounding its capture.

Governor Williams, it is said is nettled over criticisms of extravagance and has issued a crisp statement showing the reasons for expenditures under his administration. Of interest to the medical profession is the statement that the Vinita and Supply Hospitals for the Insane are crowded to their capacity and that the appropriation for the Norman Institution was a necessity on that account.

The Western Oklahoma Medical Association met in Clinton, June 23. Following was the program: "Typhoid Fever," **J. J. Williams**, Weatherford; "Uterine Misplacements, Their Pathology, Mechanical and Surgical Treatment," **J. S. Hartford** and **Curt von Wedel**, Oklahoma City; "The Dead Line Between Heredity and Environment," **L. Haynes Buxton**, Oklahoma City; "Surgical Treatment of Chronic Gonorrhoea," **C. W. Tedrowe**, Elk City. A large attendance is reported.

OSTEOPATH TO BE JUDGED BY MEDICAL STANDARDS.

In the case of *Yard vs. Gibbons*, 149 Pacific Reporter, July, 1915, the Supreme Court of Kansas affirms a judgment against an osteopathic physician for malpractice, and, in part, holds to the following:

"Whether a physician or surgeon, charged with malpractice, has treated the patient or performed an operation with reasonable skill and care, is ordinarily to be tested by the standards of the school to which the physician or surgeon belongs; but if there is uniformity in the principles and rules of practice of the different schools as to any particular branch, a qualified practitioner of any of the schools is competent to testify as to whether the treatment administered or the operation performed within the scope mentioned was properly or negligently done."

In this case a reversal was sought on the ground that physicians of the regular school were permitted to testify as to the propriety of the steps taken by an osteopath. The court held that inasmuch as the both osteopath and the regular physician testifying adopted *Edgar* as a standard on obstetrics, the defendant was not injured by the introduction of the testimony of the regulars, as such.

CORRESPONDENCE AND MISCELLANEOUS**SOME OPINIONS ON MEDICAL DEFENSE.****THE USUAL LETTER.**

El Reno, Okla., July 1, 1915.

Dr. C. A. Thompson, Muskogee, Okla.

Dear Doctor:—Enclosed find check for \$1.00 as per request for medical defense.

Respectfully,

R. F. KOONS.

NOT THAT KIND.

Elk City, Okla., June 25, 1915.

Dr. C. A. Thompson.

Dear Sir:—Blanks showing the facts in regard to Defense Bureau to hand and contents noted. Will say I am not alarmed as to suits filed against me as long as I follow a legitimate, honorable course in the practice of medicine. I will not become a party in defense of some of the practices that I know are in vogue and I wish to be informed whether I may retain my membership in the State Medical Association as formerly, or in order to retain my membership must I contribute \$1.00 to this scheme? If so, I will allow my membership to lapse. However, I would very much prefer to continue my membership in the State Association as formerly. Awaiting your reply I am,

Respectfully,

T. E. JOHNSON.

MALPRACTICE SUITS DUE TO "HAIR-BRAINED FADDISTS."

Chickasha, Okla., June 30th, 1915.

Dear Sir:—In compliance with your request, I beg to enclose herewith my check for \$1.00. I have been a constant practitioner since 1870 and so far as I know have never been in danger of a suit for malpractice. So it is reasonable to presume that I could finish the few years yet allotted me without the danger of being mulcted to a grave extent. If I should be unlucky enough for such a suit to be filed against me, I am sure I would be able to defend myself unaided. To make the entire profession responsible for the hair-brained faddist I am sure is radically wrong, and this rule enforced will cost the State Medical Association dearly. I firmly believe that fifty per cent of the members here will cancel their membership if this additional expense is continued.

Very respectfully and fraternally yours,

J. E. STINSON, M. D.

THIS ONE HAS FOUND A "NIGGER IN THE WOODPILE."

C. A. T.:—About all there is to this is you agree to furnish me legal advice in case I need it, and in case they wish to furnish it, and reserve the right to say who it shall be and I have to take the consequences and pay the damages if any due me. No, thanks. I would much prefer to run my own legal business and hire my own attorneys. Haven't had any use for one yet. Of course if this is compulsory I will pay it, but I call it a straight out graft of the cheapest type.

E. A. MAYBERRY,
Enid, Okla.**NOT AN UNREASONABLE POSITION.**

Chickasha, Okla., June 24, 1915.

Dr. C. A. Thompson, Muskogee, Okla.

Dear Doctor:—The brochure regarding Medical Defense at hand. I am carrying medical defense in another company and think I will still hold my defense in that company. The idea of a State Medical Defense is a good one, but until it is worked out more and is more positive on what it will defend I will be afraid to rely upon them. I am sending check for \$1.00 to do my part in bringing it up to a real Medical Defense. According to brochure, it leaves too many places for the other fellow to decide whether to give protection or not. I do not know whether this defense would interfere with my other policy or help to throw responsibility off my other policy, so

will not pay the \$1.00 as protection fees but give the dollar toward the cause. If you make arrangements to make joint defense with other companies it would put the protective feature of the State Medical Association on a safer basis.

Very respectfully,

W. H. LIVERMORE.

The resolutions noted below have been sent to the Journal with the request that they be published, with the hope that it may provoke an intelligent discussion of the matter. The question of "Newspaper publicity and notoriety" is becoming a vexatious one in many cities and towns in Oklahoma. The Journal will be glad to publish proper impersonal letters from members of the Association on this subject.—Editor.

RESOLUTIONS OUTLINING THE RELATIONSHIP OF THE MEMBERS OF THE MEDICAL PROFESSION TO THE PRESS.

Introduced Before Tulsa County Medical Society, June 15, 1915.

Recognizing that principles do not change though men may vary in their interpretation; that every community and country has its own peculiar problems to solve; that a new country with a rapidly growing population must invite all proper publicity through the intelligent co-operation of the daily press—and when in the course of human events it becomes necessary to call into question some of the traditions and customs of hoary antiquity, thereby assuming a position co-equal with any other co-ordinating society having a membership in the American Medical Association, and taking up their station, not separate, but equal to any which the Laws of Nature and of Nature's God entitles them, a decent respect to the opinions of mankind requires that they should declare the conditions under which such relations may be properly sustained.

We hold these truths to be self-evident, that all county societies are created equal, and that they are endowed by their creator with certain inalienable rights, that among these are professional life, liberty and the pursuit of happiness. That to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed. That whenever any form of government becomes destructive of these ends, it is the right of the profession to alter or abolish it, and to institute new government, laying its foundation on such principles and organizing its powers in such form as to them shall seem most likely to effect their safety and happiness as well as those to whom they minister. Prudence, indeed, will dictate that customs long established should not be changed for light and transient causes; and accordingly all experiences hath shown that mankind are more disposed to suffer, while evils are sufferable, than to right themselves by abolishing the forms to which they are accustomed. But when incompetent and designing physicians and surgeons may seize the opportunity and capitalize the credulity of the people through the press it is the right and duty of a progressive, responsive and responsible medical profession to provide new guards for their future security.

With this end in view, Therefore be it Resolved by the Tulsa County Medical Society, in regular session assembled, that, whereas it is desired to extend the scope and usefulness of medicine through all proper publicity on liberal ethical lines, with especial reference to hygiene, sanitation, public health and safety, it is the sense of this body that a competent Publicity Committee consisting of three members be appointed to co-operate with the editors of the public press with the view of securing accurate knowledge concerning the foregoing and who shall be guided by the following:

- (1) To prevent the publication in the daily press of misleading and erroneous statements on medical topics.
- (2) To prevent the publication of cures and surgical operations so exaggerated and false and mental anguish, physical suffering and expense would be imposed upon the sick and afflicted.
- (3) To prevent the detailed reporting of ordinary medical cases and surgical operations of no interest to the medical profession and often misunderstood by the public and serves but to exploit the narrator.
- (4) To act as an advisory committee, if so desired, to members of the Society, who contemplate publishing medical articles in the newspapers and who wish to conform to the principles of ethics.
- (5) To further the publication of scientific articles on medical subjects relative to the public health and safety.

(6) To recognize the established principle that a man of medicine should not lose his identity as a unit of society and as a good citizen he is entitled to the same credit and public notice of any other person of equal activities and attainments. And to encourage good citizenship among all members of the profession by exposing without fear or favor, before the proper medical or legal tribunals, corrupt or dishonest conduct or practice of members of the profession.

(7) To seek the co-operation of the editors of the public press to accomplish these purposes.

A CORRECTION.

Tulsa, Okla., July 8, 1915.

Dr. Claude Thompson, Muskogee, Okla.

My Dear Doctor:—In the July issue of the Journal I am misquoted. My statement relative to cancer of the breast is as follows: It occurs to me, in view of the fact that ninety percent of all palpable tumors of the breasts either are or become malignant, the radical operation is indicated.

Yours fraternally,

M. A. HOUSER.

NEW APPOINTMENTS OF STATE COMMISSIONER OF HEALTH.

Inspectors of Food, Drugs, Sanitation and Hotels: Peter Biewer, Oklahoma City; Caswell Bennett, Ardmore; W. G. Short, Durant; J. P. Folan, Perry; S. B. Howard, Oklahoma City; N. F. Hancock, Muskogee; W. W. Breedlove, Fairland; Harry Setzer, El Reno.

The list of County Health Officers appointed in June are as follows: Dr. J. A. Miller, Beaver; Dr. H. B. Fite, Tahlequah; Dr. D. C. Gamble, Boise City; Dr. E. W. Reynolds, Bristow; Dr. E. A. Pickens, Grove; Dr. L. E. Emanuel, Chickasha; Dr. A. B. Callaway, Stigler; Dr. J. Scott Lindley, Fairview; Dr. W. W. Sames, Hartshorne.

EXAMINE THE PLACENTA.

In every case of confinement it will be well to examine the placenta very carefully in the presence of some other person and to have recorded in your notes of the case the fact that this was done and the name of the person who witnessed the examination. Damage suits for alleged malpractice based on alleged negligence in obstetrical cases, are increasing. Referring to this point one of our attorneys, Mr. Morrow, writes:

"We have had from time to time the same point urged as a basis for suit, and while there is no doubt at all that every physician does make such examination thoroughly as a matter of course, nevertheless to have it appear clearly from the testimony of a nurse or some other person that such examination was made would perhaps keep patients from basing suits on such ground."

This is a very good place in which to remind you again about the importance of keeping sufficiently full records; and let the fact of the careful examination of the placenta, together with the name of the nurse or other person who was present and witnessed it, be a part of the record in every obstetrical case.—California State Journal.

NEW EVIDENCES OF NEED OF VITAL STATISTICS.

Because Kansas did not organize a vital statistics registration department years ago, and keep an accurate record of all births and deaths in the state, Kansas descendants of persons killed in the European war are going to lose thousands, if not millions, of dollars in estates in Europe, according to W. J. V. Deacon, state registrar of vital statistics. Already several inquiries have been received by Registrar Deacon as to what has become of Europeans who are supposed to have settled in Kansas in times past.

"Landed interests of the entire world are being reorganized as a result of the world war," said Deacon. "It is developing new lines of descent and inheritance. Whole families are being killed, and their estates descend to distant heirs. This department has been asked to provide proofs as to the identity of Kansans believed to be heirs of estates in the old world. Because no registrations of birth were kept, we cannot furnish the information."

Not more than 80 per cent of the births in the past have been reported to the state, Deacon says, and until the vital statistics registration law is strictly observed all over the state, this condition will prevail. Under the present law, any physician

who does not report promptly to the county, district or city clerk, any deaths or births, is subject to a heavy fine. The death reports are believed to be accurate, but it is known that more than a thousand births a year are escaping registration.

Of the nations at war, Austria-Hungary has 13,172 natives now living in Kansas; Belgium, 1,703; Great Britain, not including Canada, 34,550; Russia, 15,311; France, 2,656; Germany, 34,506; Italy, 3,517, and other nations, 1,769. These figures include only those born in the countries named, not any of their children or descendants.—Topeka Capital.

BAKING POWDER AND PURE FOOD.

The doctor frequently has occasion to prescribe a diet for his patient and under such circumstances is interested in the healthfulness and action of every ingredient of the food. Probably no ingredient is more influential in the production of appetizing and nutritious foods than is baking powder, and at the same time there is no ingredient over which there has waged such fierce trade controversies as to healthfulness and efficiency. In view of these facts, the medical profession will welcome a concise treatment, setting forth in simple language the facts in relation to the manufacture, chemistry and relative healthfulness of the different kinds of baking powder.

Thomas G. Atkinson, M. D., L. R. C. P. (London) in his new book of 58 pages, entitled "Baking Powder—A Healthful, Convenient Leavening Agent," gives us this concise, rational treatment in such simple terms that even the housewife who had not studied chemistry would grasp the entire significance of every step in the presentation of the subject. This book should do away with the misconceptions fostered by the false advertisements of trade interests and will insure a wiser course in the selection of the type of baking powder to be used in the home or sanitarium, through its presentation of the work a baking powder is expected to do and what combination can be employed to effect this work most perfectly.

The comparison as to healthfulness is based directly on the chemical reactions that take place in the baking, by comparing the amounts of residue from different powders of the same strength in the light of their medicinal doses. Every physician will be amply repaid for a study of this book. Price 50 cents. Published by The Commonwealth Press, Chicago, Ill.

NEW BOOKS

A TEXT-BOOK OF DISEASES OF THE NOSE AND THROAT.

By D. Braden Kyle, A. M., M. D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia. Fifth edition, thoroughly revised and enlarged. Octavo of 856 pages with 272 illustrations, 27 of them in colors. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$4.50 net.

For several years Kyle's Diseases of the Nose and Throat has been classed as a standard and this edition is deservedly in that class. So closely is the work of the specialist allied with that of the general practitioner that it is necessary to be constantly on the alert in order to render the maximum of service to our clientele. In this work Kyle undertakes to elucidate the many different conditions affecting the nose and throat. In doing so the immense scope of the field considered must be apparent and the volume considers every condition the practitioner is liable to have confronting him in the nose and throat. The rarer conditions have not been slighted in the makeup, while the treatment of the commoner affections, such as diphtheria, scarlet fever, the varied forms of rhinitis, syphilis, affections generally of the larynx, have been adequately handled. The operative work necessary is well illustrated as is the pathological aspects of disease. Much of this illustration is in beautiful color, all of which adds to the attractiveness and value of the work. It is to be commended especially to the student and general practitioner.

PRINCIPLES OF HYGIENE.

The New (5th) Edition.

PRINCIPLES OF HYGIENE: For Students, Physicians and Health Officers. By D. H. Bergey, M. D., First Assistant, Laboratory of Hygiene and Assistant Professor of Bacteriology, University of Pennsylvania. Fifth edition, thoroughly revised. Octavo of 531 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$3.00 net.

This work contains much valuable information in a condensed manner and should appeal to the health officer especially, as well as those charged with the construction of school-buildings and those interested in ventilation, heating, water supply and sewage disposal problems. The chapters devoted to water purification are good and the one devoted to sewage disposal, which is sufficiently illustrated to make the text clear, is of value to those who are interested in that work. The suggestions as to surface or soil closets are pertinent and well worthy of adoption in many of our smaller towns and villages where this phase of the production of disease is ignored more or less. To medical inspectors of schools and to instructors and superintendents generally, the chapters devoted to school hygiene and medical inspection will be found of value.

MURPHY'S CLINICS FOR APRIL.

W. B. Saunders Company, Philadelphia. Price per year—Paper, \$8.00; cloth, \$12.00.

The contents of "The Clinics" for April, while not as extensive as have frequently appeared in other issues, are at the same time fully as interesting. There is more detail in these articles, which make them of great value. The following subjects are considered:

Murphy's Clinical Talks on Surgical and General Diagnosis; A Diagnostic Talk on Osteomyelitis; Recurring Multiple Osteomyelitis and Periostitis—Curetment of Sinuses and Granulation of Masses; Acute Osteomyelitis of the Right Radius—Incision and Drainage.

Bony Lipping of the Right Acetabular Margin and of the Neck of the Femur Following a Metastatic Arthritis; Arthroplasty of the Hip; Cheilotomy.

Carcinoma of the Breast (a Talk by Dr. William L. Rodman of Philadelphia).

Carcinoma of the Colon; Diffuse Miliary Carcinosis of the Peritoneum; Exploratory Operation.

Epithelioma of the Upper Lip Starting in an Old Lupus Scar—Excision, Plastic Closure

Intramural Fibroid of the Uterus—Diagnosis—Hysterectomy.

Hypertrophy of the Prostate; Urinary Retention and Self-Catheterization; Cystitis, Prostatitis, With Multiple Abscess and Fistula Formation; Perineal Prostatectomy.

Spontaneous Massive Coagulation of Cerebrospinal Fluid With Xanthochromia—Its Significance in the Diagnosis of Lesions of the Spinal Cord and Its Membranes—(A Diagnostic Talk by Dr. Charles Louis Mix).

Dr. Murphy's talk on Osteomyelitis should prove of much value to the general practitioner who, while he sees few of these cases, should appreciate and be fully prepared to deal with such troubles without delay.

The talk by Dr. Rodman on Carcinoma of the Breast, like all of Rodman's addresses, is extremely interesting.—J. H. W.

THE MEDICAL CLINICS OF CHICAGO.

Volume I, Number 1. (July, 1915.)

THE MEDICAL CLINICS OF CHICAGO. Volume I, Number 1. (July, 1915.) Octavo of 208 pages, 37 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Published Bi-Monthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

This new contribution to medical publications is something extremely while. It is distinctly in the class of Mumford's Surgery, Cabot's Differential Diagnosis, and the Surgical Clinics of John B. Murphy. Each case, a monograph on the subject, is handled with the intimate care and personal element which goes so far in riveting the attention of the reader and student to the outstanding features of the case considered. The variation of the subject matter is wide and sensibly arranged to meet the everyday needs of the practitioner. As an illustration of this is to be noted the very first case—one which has proved a pitfall for so many us of—"Lung Abscess with the Picture of Tuberculosis." Aside from the pertinency of this subject the reader is at once impressed with the ease and fluency of the style of expression, so worded that one sees the subject before him and follows the fine enunciation of the clinician at every point.

Twenty-one subjects are considered in this first issue by the following well-known Chicago clinicians: Drs. Charles L. Mix, Chas. Slencer Williamson, Isaac A. Abt, Robert B. Preble, Maurice L. Goodkind, Frederick Tice, Walter Hamburger and Ralph C. Hamill.

The issue is well illustrated by both charts and cuts, some in color. In this work the practitioner has an opportunity to obtain the same style so effective in Murphy's Clinics and by beginning with the early issues of the work will soon have accumulated a most valuable reference work not obtainable by any other means.

THE CARE OF THE BABY.

The New (6th) Edition.

THE CARE OF THE BABY. By J. P. Crozer Griffith, M. D., Professor of Diseases of Children in the University of Pennsylvania. Sixth Edition Thoroughly Revised. 12mo of 463 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$1.50 net.

This is a carefully prepared volume of eleven chapters and appendices, the preparation bearing in mind the necessary instruction of mothers and nurses in the care of the baby from before birth. Necessarily it is written in plainer terms than are text books on such subjects. An idea of its scope may be inferred from the titles of the following chapters: Before the Baby Comes; The Baby, Growth, Toilet, Clothes, Feeding, Sleep, Exercise, Training, Nurses, Rooms and Sickness. The appendices, two in number, contain formulae on Dietary; Remedies for Local Use; Remedies for Internal Administration and Miscellaneous, which considers the simpler things, often so simple that they are disregarded and therefore difficult of obtaining when we need them in emergency. The work should prove useful to all nurses, especially the student nurse. Its preparation is such that hardly a more useful offering could be made to the expectant mother.

THE HOROWITZ-BEEBE TREATMENT FOR CANCER.

In response to numerous requests The Journal of the American Medical Association, in its issue of July 24, considers the Horowitz-Beebe treatment for cancer. This treatment, generally spoken of in the newspapers as the autolysin treatment, was first announced in the New York Times, Feb. 19, 1915. The remedy is said to be made from the following drugs, but the quantities used are not disclosed: *menyanthes trifoliata*, *Melilotus officinalis*, *Mentha crisper*, *Brassica alba*, *Anemone hepatica*, *Viola tricolor*, *anthemis*, *frustus colocynthidis*, *lignum quassiae*, *Urtica dioica*, *radix rhei* and hedge hyssop. *Menyanthes trifoliata* is a little-used drug called buckbean. *Melilotus officinalis* is the common yellow sweet clover growing in waste places. *Mentha crisper* is a variety of mint which grows in Europe. *Brassica alba* is better known by its common name, white mustard. *Anemone hepatica* is the ordinary spring flower generally called liver leaf. *Viola tricolor* is pansy; it has been tried and discarded repeatedly as a "cure" for cancer. *Anthemis* is Roman camomile. *Frustus colocynthidis* and *lignum quassiae* are terms used for colocynth and quassia, respectively. *Urtica dioica* is common nettle.

"The reader may be able to recall some other unused 'herbs' that are not mentioned in this list," says The Journal, "especially if he attended medical school thirty or forty years ago. As one critic of the matter has said, apparently the only ingredient overlooked in the preparation of the new remedy was a rabbit's foot."

It is noted that aside from a very unpromising report published by Beebe, apparently all that has been published in any medical journal are stereotyped excerpts from it which have appeared simultaneously as abstracts in several medical journals. If this were all that had been published, there would probably not be the prevailing excitement over the subject. The greatest marvel, perhaps, was why this report was published at all, dealing as it does with only sixteen cases, under only a short period of observation, with results that are apparently no better than could be secured by applying arsenic paste or injecting a solution of escharotic substance into the tumors.

The questions asked by The Journal are: "What is there of scientific interest or therapeutic advance in such a procedure? Why should any person with critical judgment or scientific training of the slightest degree rush into print with a cancer treatment of but a few weeks' or months' trial, and founded on nothing more theoretically sound or inspiring than a chinese materia medica? Why, too, should the lay press be furnished with literary articles on the subject by some of those engaged in promulgating this treatment, and why should these articles be embellished with exquisite half-tone reproductions of the features of the experimenters?"

The status of the Horowitz-Beebe method of treatment of cancer can be estimated by applying an average knowledge of pharmacology, sociology, psychology and, above all, we fear, economics.

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Next Meeting—Oklahoma City, July 12, 1915.

Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.

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No. 4

THE SURGICAL TREATMENT OF POTTS' DISEASE.*

Roseoe Walker, M. D., Pawhuska, Okla.

In choosing the subject, "The Surgical Treatment of Potts' Disease," I meant to cover the field, but found it too voluminous for a paper at this meeting, where brevity is most desired. Having been associated with Dr. Albee for two years in the capacity of Interne at the Post-Graduate Hospital, New York, I decided to confine my paper to the subject of "Inlay Bone Graft for Potts' Disease," the operation of which he is the originator.

Great strides have been made in bone surgery since the discovery that bone (or other cellular life) will retain its viability independent of organic or somatic life. The duration of this life depends upon the preservation of the parts, or upon the body in organic death, and also the amount of disintegration from the causes of death. The higher the specialization of the cell the poorer the resisting power. Bone then makes very suitable material for transplantation.

Autogenous grafts are the most suitable and are successful at times even in the presence of infection. Hemoplastic (those obtained from another individual) are not so reliable. Heteroplastic (those obtained from a different species) have seldom grown.

The fundamental principal of tissue grafting is the coaptation of the histological layers. Nature, as Albee states, is confronted with the following problems: (1) The rapid establishment of cellular nutrition and blood supplies, which is brought about by the extension of the blood vessels by the cellular assimilation of the serum in which the graft is immersed; (2) The union of the graft to the contacted bone or fragments of bone by (3) The adaptation in form and increased strength of the graft to its mechanical requirements through the influence of Wolf's Law.

Macewan proved in 1911 that periosteum was not a bone producing tissue, differing from two generations of histologists. This has been confirmed by many and lately, March, 1915, by Davis and Hurricutt of Johns Hopkins laboratory of experimental surgery. It acts only as a limiting membrane. They also substantiated Macewan in the stand that osteogenic cells are found in the hard bone just beneath the periosteum. They found that the iso-bone graft acts only as a scaffolding and is eventually absorbed. Both auto-bones and iso-bone are eventually absorbed and transplanted to tissue not in contact with fresh bone.

*Read before Surgical Section, Oklahoma State Medical Association, Bartlesville, May, 1915.

There are many good men who hold that all bone grafts are eventually absorbed, acting only as a scaffolding and replaced by new bone. Albee, Macewan, Kauch and others maintain that bone transplanted into bone persists and lives as such.

It matters little which view is correct, as X-ray and animal experiments have proven that the supports remain. The fact that the spinal processes are about three-fourths of an inch apart, with a thick ligamentous tissue between, makes an ideal bed for the bone transplant.

The logic of the Albee operation, I think, will appeal to us all. Immobilization of tuberculous joints has been our one aim. This, I believe, his method succeeds in doing. He reports in April, 1914, 178 cases in three years with good results. This year's reports are not out but he writes me that he is receiving favorable reports from all over the country.

There was an adverse report of 15 cases at the American Medical Association meeting in June, 1913, by the attending surgeon of Sea Breeze Hospital, in which he stated that the kyphos returned. This has influenced many of the men to deviate from the Albee technique by keeping the patient in a cast from one to six months.

The technique of the Albee operation is simple, taking from fifteen to thirty minutes with no hemorrhage or shock. A semi-circular incision is made through the skin to prevent the poorly nourished scar from coming in contact with the transplanted bone. With a scalpel the cartilaginous tips of the spinous process, supra and interspinous ligaments, are divided for a depth of three-fourths of an inch—that is, to the base of the spinous processes, beginning one or two spines above and including one or two below the lesion. Then green-stick fracture the spines all on the same side. A hot compress is applied to stop what little hemorrhage occurs. Then flex the leg on the thigh and make an incision down to the crest of the tibia. Clean away tissue on the internal-anterior aspect and, with a sharp chisel, cut a prismatic section one-third to a half inch thick and from two-thirds to three-fourths inches in breadth, the length depending on the number of vertebrae involved. Insert the section and tie in firmly with interrupted kangaroo sutures through supra-spinous and inter-spinous ligaments of each side. If there is much deformity the graft may be put in flat and bent or sawed half through at frequent intervals, which permits the necessary bending. Cut the periosteum at frequent places to permit exit of the osteogenic cells beneath. Close without drainage.

Albee puts them on a hard bed or gas pipe frame for from five to twelve weeks following operation. Bony union at the end of this time has taken place. The majority of his followers, I believe, are keeping them in a cast from one to six months.

The immediate results of this operation has surprised even the conservative men. I have seen patients gain weight steadily immediately following operation. The course of the disease is much shortened and it makes it possible to do away with a bunglesome cast which has to be used for so long a time. The advantages of the simple operation are so evident I will not take up your time enumerating them.

The Hibbs operation for the same condition is giving about as good results, but I am unfamiliar with this method. Time alone will determine the merits of the two procedures. I wish to thank Dr. Albee for his help in the preparation of this paper.

DISCUSSION.

Dr. Robt. Hull, Oklahoma City: Mr. Chairman and Gentlemen: This paper is a very timely one on this subject and I believe it is the first time

the subject has come before the Association. The operation has now been done for about four years. It was possibly suggested to Dr. Albee by the attempts of Dr. Lange, who first attempted to fix the spine by the insertion of a steel splint buried beneath the skin. These attempts were not successful. At about the same time that Dr. Albee brought out this operation, another New York surgeon, Dr. Hibbs, of the New York Orthopedic Hospital, suggested another method of fixation of the spine, which differs in technic but not in principal. Briefly explained, it consists in producing a partial fracture of the spinalis processes, bending them down so that each rests upon the one below, also in stripping off small pieces of the laminae and bending those down to touch the adjacent one, the object being to stimulate bone production so as to produce a fusion or coalescence of the vertebrae involved.

Dr. Walker is qualified to write this paper, as he was associated with Dr. Albee for two years. I believe I am safe in saying that the orthopedic men are divided and, while a great many men who are orthopedists put through operations yet, a great many of us are simply waiting a few years more to determine its exact value. When the operation first came out I went to New York and saw it performed, but up to the present time I have not used it myself. I have simply not yet settled in my mind the permanent results of those operations. There is no doubt but that the patient seems to improve and gain in weight. That improved condition may be accounted for from the reason that these children are put to rest for a period varying from three to six months, but a tubercular spine put to bed in that condition will improve wonderfully. I have a child in Oklahoma City and I believe that child in six weeks has gained ten pounds, due possibly simply from the rest and fixation. If you can promise these children, and if you know to a certainty that this operation is going to give them a thorough ticket to good health, then the operation is advisable.

Many men are hesitating about this operation because they do not know what is going to become of that graft. The fixation treatment of tubercular spine is perfectly satisfactory either by the use of braces or plaster paris. I probably have twenty cases of tuberculosis of the spine and, with one exception, they are all going to improve. The one exception is a man who has had four months chiropractic treatment and is in bed and will probably stay there until he dies.

I have the greatest admiration and respect for the originator of this operation because Dr. Albee and I were schoolmates and in college together and worked together during the summer vacation. What he has accomplished is accomplished through his own efforts. I sincerely hope that the operation will prove to be successful. The operation has only been in existence four years and has not stood the test of time. But the point I want to make is that I hope every one of you will not take a chisel and hammer and go to work on tubercular spine and graft it.

Dr. John Overton, Tulsa: I think probably some of these bad results may be due to a fault in technic and in bone graft work, as that is what we all have impressed on us in reading Lane's table. It requires more care than any other form of surgery and if a man does not carry out every detail he may look for bad results. As to the closing statement of Dr. Walker, I agree with what Dr. Hull said in the matter of over-enthusiasm of the originator as to the permanent results. We have not had time to tell.

I want to cite one case in which I believe rest in bed caused gain in weight. It was a baby four years old and it had tuberculosis of the lungs. It was sent for operation. It did not seem to be doing well in the ward; never did and it laid there and ran a temperature from 100 to 101 every day, and we never got a smile out of it. Immediately following the operation it began to eat, brighten up and take on weight.

CONGENITAL DISLOCATION OF THE HIP.*

Robert L. Hull, M. D., Oklahoma City, Okla.

During the past eight years it has been the privilege of the writer to examine many cases of congenital dislocation of the hip. It has also been his privilege to operate upon many of them and to secure in a majority of them perfect anatomical and functional results. Several of the children which have been examined have of necessity been rejected as being unsuitable for operation. The reason for their rejection was because of the fact they were too old and that they had passed the operative age limit beyond which good results cannot with any degree of certainty be promised. Careful inquiries of the parents in every case were made to ascertain the reasons for such apparent neglect. The replies received convinced the writer that in many of the cases the fault had been with the medical adviser. The advice that had been given was not the advice that should have been given, but which unfortunately had been followed until it was too late to have the mistake corrected.

The subject of congenital dislocation of the hip is not a new one. It is possible that this is the first paper upon this subject ever presented to this society. It is also possible that it is of little interest to the general man, but whether it is full of interest or devoid of it, it is absolutely necessary that every medical man possess a thorough knowledge of it which will enable him to make a correct diagnosis and to advise properly as to treatment. The responsibility of the general man in these cases is a great one and cannot be overestimated. The frequency with which these cases occur is perhaps not familiar to all. It is not a rare condition and is found to occur in girls more frequently than in boys, in the proportion of four to one. Cases are usually overlooked in early infancy and are not recognized until the child begins to walk. The only symptom or sign that is noticed then by the parents is a slight limp. As this limp is painless and in some cases very slight in degree, parents are not usually alarmed or greatly disturbed, especially if assured by friends or by the medical adviser that there is nothing the matter with the child but what he or she will outgrow. Such advice is and has been given too frequently in the past and only serves to deprive a child of the privilege of being cured of a distressing condition and also to bring reproach upon the medical profession.

A diagnosis of this condition is about the easiest thing in medicine and surgery and ought never be overlooked by any one of us. Every child who presents any evidence of claudication or lameness should be examined, the clothing, of course, being entirely removed. If the case is one of congenital dislocation of the hip the following interesting points will be observed: (1) A history of a painless limp since it began to walk; (2) the difference in the appearance of the two hips as viewed both from the front and from the back; (3) the difference in the lengths of the limbs as measured from the anterior superior spines to the inner malleoli; (4) the elevation of the great trochanter above Nelaton's line on the affected side; (5) the absence of the head of the femur from the acetabulum and the detection of it upward and posterior on the back of the ilium. The instability of the joint, the freedom of motion in all directions, the absence of all signs of irritation and muscular spasm will be apparent to the examiner. The above mentioned signs and symptoms together with an X-ray should present no difficulty whatever in making a positive and correct diagnosis.

Should both hips be dislocated, or what is termed double or bi-lateral dislocation, it will be noticed that the child may be late in walking and that the gait is not that of a simple limp, but more of a rolling or waddling or

*Read in Section on Pediatrics, Oklahoma State Medical Association, Bartlesville, May, 1915.

sailor-like gait. The physical appearance of the child on standing, the clothing having been removed, is striking and characteristic. One can not fail to notice the marked lumbar lordosis, the prominence of the abdomen, the unusual breadth of the hips, the elevation and prominence of the great trochanters. Both limbs, of course, will be found to be of variable length and both trochanters will be elevated above Nelaton's line. The heads of both femurs will be found absent from the acetabula and backward and upward upon the back of the ilia. An X-ray is only necessary to confirm the diagnosis.

Because of the ease and certainty with which a diagnosis of this condition can be made at any time after birth, whenever a couple of minutes is given to an examination of the hips, and in view of the fact that a positive diagnosis as early as possible is desirable, it would seem advisable to spend at least sufficient time to examine the hips of every infant. Early detection of dislocation means earlier institution of treatment and better results.

The disability that will be caused by a single or unilateral dislocation, if allowed to remain uncorrected, will vary greatly in degree. It is true that in some cases children with single dislocation will go through childhood, to adult life and to old age, with very little disability and with very little pain and discomfort. With the exception of the limp, which has a tendency to increase as the age advances, there is little to attract one's attention. In other cases, as adult life is approached and as the weight of the body increases and the use of the limb incident to the different trades and occupations that are pursued is increased, the condition is associated with considerable pain and discomfort. This pain is the result of muscular and ligamentous strain incident to the use of a weak and unstable joint. In cases of children with double dislocations the disability is more pronounced. While such cases may pass through childhood without any difficulty, few of them are able to go through adult life other than as semi-invalids, for, as the body takes on weight, locomotion becomes more difficult and in many cases becomes impossible without assistance.

With such an unfavorable outcome it should be obvious to all that if these cases are amenable to treatment, that every case should by all means receive such treatment. And when it can be presented as indisputable facts that between the ages of two and seven for single hips and from two to five or six for double hips that fully 80 to 85% of single hip cases and from 60 to 70% of double hips are cured, it should at once be apparent that an attempt or several attempts be made to cure every case. It ought to be very clearly understood that because of the abnormal position of the head of the femur upon the back of the ilium, and in view of the alteration in the shape of the femur and especially of the head and neck and of the filling in of the acetabulum, and of the changes that would necessarily follow in the muscles and ligaments surrounding the hip because of this changed relationship, that the earlier the normal position be restored the more perfect will be the functional and anatomical result. It is absolutely essential that this be done early in life if a perfect result is to be obtained. In cases of single hips in which treatment is delayed until the child is 7, 8 or 9 years of age, a perfect anatomical replacement may be secured, and yet, because of altered changes in the bony structures, especially in the head and neck of the femur, in which a forward twist is common, the so-called ante-version of the neck, a perfect functional result can not be secured and although the patient may be greatly benefited the result is not perfect.

Other late cases are frequently seen in which the acetabulum is so shallow that, although there may be no difficulty in securing a replacement

of the femur, it may be found impossible to hold it there. In such cases it is far better for the patient to have the upward and backward dislocation converted to an interior or forward one. This position enables the unfortunate one to go through life with less limp and with less pain and discomfort.

There are two general methods of securing the reduction of congenital dislocated hips: (1) the manipulative method and (2) reduction by open incision. Ninety-five per cent of all cases within the age limits can be successfully reduced by manipulation and the remaining five per cent may require to be reduced by open incision. The manipulative method is popularly known as the Lorenz method, or the so-called bloodless one. This last term is a misnomer, for in many cases there is more extravasation of blood into the tissues than would be lost by open incision. In the use of this method operators employ different steps according to individual preference in obtaining the replacement. As a preliminary step a thorough stretching of all the contracted muscles and ligaments is first secured. The flexors, extensors and adductors are thoroughly stretched before the reduction is attempted. When the head of the femur can be brought down level with the acetabulum, an attempt may be made to slip it into place through leverage and direct pressure applied upward on the great trochanter. The method of Lorenz may be followed, or the plan suggested by Cabot, or the method of Ridlon or Davis. Of late years there has been a tendency to do as little preliminary stretching as possible—only just enough to enable the head of the bone to be replaced. That this preliminary stretching may still further be reduced Hibbs, Bradford and others prefer the assistance of mechanical aid through which the head of the bone may be pried into place with very little traumatism and with precision.

The slipping of the head of the bone into the acetabulum is usually accompanied with a distinct, audible click, and immediately the appearance of the limb is perceptibly altered; the increased stability, the increased fullness in place of the shallowness just below Poupert's ligament, the tightening of the hamstrings, thus producing flexion of the leg on the thigh and the resistance to extension; the disappearance of the head of the bone from the back of the ilium and its detection in the acetabulum as revealed by palpation and rotation. These are all positive signs of a successful replacement. Should the limb be now released it would immediately slip out again, therefore it should be brought to that position in which there is the least danger of it becoming again dislocated and firmly held there for a sufficiently long time. The right angle flexion and abduction position of Lorenz, the so-called frog position, is the best for many cases. The flexion, abduction and inward rotation position of Mueller is preferred by many, and the lessened flexion and abduction plan of Cabot is used by some. It is possible that during the attempted reduction that a fold of the capsule is pinched between the head of the bone and the acetabulum. This will be manifested by its immediate tendency to slip out with the slightest motion. Should this occur a more thorough stretching should be made and a further attempt to secure the reduction. In some cases two or more attempts may be necessary before a suitable replacement can be made, but when once secured it should be maintained. It is spectacular to cause the head to slip out and into the acetabulum but it is not a good thing to do.

The simplest and best method of maintaining the reduction is by the application of a plaster of paris spica extending to below the knee, and for a short time including the opposite thigh. This plaster must be applied most carefully, for it is during its application that the hip may slip out of the acetabulum without being noticed and is discovered only when the plaster is changed several months later. This first plaster is allowed to

remain on for a period of from ten to twelve weeks, during which time it is absolutely essential that perfect cleanliness be maintained so that excoriations may be prevented. It is because of the difficulty of maintaining this cleanliness that treatment can not satisfactorily be begun in young children. It is advisable to wait until the napkin stage is over.

An early diagnosis will enable the mother to so train the child that habits of cleanliness can be formed as early as possible. These plasters must be changed from time to time and at each successive change the position of the limb is altered and gradually brought down parallel with the unaffected one. Treatment must be persisted in for an indefinite period of time, varying from six months to a year or more, depending upon the age of the child and the difficulty of the case. Weight bearing may be permitted at the time the limb is brought down sufficiently low to enable the foot to touch the floor. After all plasters are discontinued the stiffened and contracted muscles may be improved by massage and active and passive movements. These treatments should be continued until normal functional motion is secured.

Reduction by open incision is reserved for those cases which are too old for successful reduction by manipulation and for those cases in which manipulation has been tried several times and in which success has not been attained. After the hip is reduced the after treatment is the same. In cases of double or bi-lateral dislocation, both hips may be reduced at one sitting, or one hip may be carried to completion at a time. The only objection to this latter plan is the length of time required to accomplish the work, but I am of the opinion that in the absence of two or more trained assistants that it is better to follow this latter plan. It has been above stated that the critical point of the operation is the application of the plaster, for it is at that time that unless the hips are properly held that a re-dislocation may occur and may pass undetected and usually is until the plaster is removed some two or three months later.

It might seem to some of you that an X-ray plate taken of the hip a day or so after the application of the plaster would clear up any doubt that one may have. Such is the routine with many men and with myself, but with the hip in the frog position of Lorenz, I am never certain of my interpretation of the plate with reference to the position of the head and of the acetabulum. Therefore the plate is of no value in relieving me of any apprehension that I may have that some slight slipping might have taken place. The palpation of the round head of the femur in the groin beneath the plaster is of more comfort. In closing I will briefly and in a general way refer to four cases of congenital dislocation of the hips upon which I have operated during the past three years and a half.

Case I: Girl, age 3, presenting a condition of double or bi-lateral dislocation of both hips. Referred to me by Dr. Gooch of Lawton. Operation was performed at Wesley Hospital in February, 1912. Both hips were reduced at this time and retained in the frog position by a double plaster of paris spica. In successive intervals of two and a half to three months these plasters were changed and the limbs gradually brought down to full extension. At the end of ten months plasters were discontinued and child kept in bed for another six weeks and then allowed to walk. When the plasters were removed examination and X-rays showed both femurs to be in place, but revealed considerable alteration in the shape of the heads and very marked forward twists of both necks of the femurs. Child very soon began to walk, but with considerable waddle to her gait. This has decidedly decreased and at the last examination, made some few weeks ago, a very marked improvement was clearly apparent. Both hips are still in the acetabula and this imperfection of gait is solely due to the bony altera-

tions in the necks of the femora. As long as improvement is progressing nothing further will be attempted and it is hoped and it can reasonably be expected that in time the imperfection in the walk will be hardly noticeable.

Case 2: Girl, 11 years of age. Right congenital dislocation of the hip. Operation performed at the request of the mother, who was told that a perfect result could not be obtained. In September, 1913, at St. Anthony's Hospital, under an anaesthetic, a forcible stretching of the contracted muscles was secured and an unsuccessful attempt made to secure the reduction. Plaster spica was applied to the limb in the position of flexion and abduction and in ten days another attempt made to secure the reduction, and it was successful. Plaster was applied in the frog position and at intervals of three months was changed and limb brought down in full extension. At the end of ten months plaster was discontinued. Patient was walking at the end of the eleventh month and has been walking ever since. Hip is in place and at the time of my last examination child is walking very well. Considerable stiffness and some limitation of motion is still apparent, but it is believed this will disappear.

Case 3: Girl 2 years old. Congenital dislocation of right hip. Referred to me by Dr. Antonio Young of Oklahoma City. First examined child when it was about 16 months old. Operation was deferred until she had passed the napkin stage. Operated upon at the University Hospital in April, 1914. Hip was reduced and plaster applied. This was changed in two months and again in three months. In six months from time of operation child was walking free from any sign of lameness. Last examined by me about four weeks ago and the result is perfect in every way.

Case 4: Girl, 2½ years old. Congenital dislocation of both hips. Referred to me by Dr. Roscoe Walker of Pawhuska, in November, 1914, right hip was reduced and plaster applied. This has been changed twice and was left off about three weeks ago. Hip is now in full extension and is in place. On Saturday last I reduced the left hip and applied plaster spica in the frog position. I am hopeful of securing in this case a splendid result.

THE FORMALDEHYDE TREATMENT OF COMPOUND FRACTURES.*

Dr. W. W. Jackson, Vinita, Okla.

From the earliest days of medicine bone pathology has engaged the attention of the professional man, and the instinctive apprehension with which a man of today approaches any involvement of the osseous structure is not much less than was that of his professional brother of 2,000 years ago.

The subject of compound fractures, while strictly surgical, is of vital interest to the internist because of the fact that in the majority of cases he is the first individual called into the case. It is upon his decision as to the course of action to be pursued that rests the patient's subsequent status as a producer from the economic standpoint. It is of interest to him from the professional standpoint that the treatment chosen shall be productive of the best cosmetic results possible, for there has never been a case recorded of an individual who obtained a poor result in a fracture who ever moved out of that particular neighborhood. They always stay right there and take joy in pointing to their case as a glorious illustration of the dense ignorance and stupidity of Dr. Smith or Dr. Jones, as the case may be, regardless of the conditions under which the physician in question may

*Read in Section on Surgery, Oklahoma State Medical Association, Bartlesville, May, 1915.

have been forced to handle the case. It is of interest to him financially because there are more suits brought for alleged mismanagement of fractures than all other forms of surgical suits combined. Both professionally and financially it behooves him to see that every precaution is taken to insure as good a result as possible.

With present facilities it is negligent for any physician not to insist on a properly taken skiagraph of any fracture. It not only certainly checks up the clinical date, but also affords him the only indisputable evidence as to the actual condition should future litigation arise.

In compound fractures the surgeon of fifty years ago had two options, viz: amputation forthwith or a death from general sepsis. The mortality at that time was between 50 and 60%. With the advent of Lister's principles of antisepsis the mortality dropped to about 9%, and today is approximately 4% from all causes.

Of course, surgically, every case of compound fracture is infected, and the condition sought in such a fracture is to convert it at the earliest possible moment from an infected compound to an aseptic simple fracture. It is on this principle that the method I shall here discuss is based, and I shall first take up the technique and then the reason for the same.

Take, for instance, a case of compound, comminuted fracture of the tibia, which is perhaps the most frequent type and location of this class. The limb is first painted with 3% iodine and then shaved, as tr. iodine has no antiseptic value on a wet surface. It is then dried with alcohol and ether. The wound itself is painted with the iodine and kept free from lather in the operation of shaving. Any portion of the shaft of the bone which may be projecting from the wound is clipped off with bone snips and the fracture reduced as far as possible. Comminuted fragments of the shaft not seriously displaced from line are not interfered with, as they act as a basis for the future callus deposit. Hemostasis of any large vessels is effected; the oozing is disregarded. Commencing then at least six inches above the wound, the limb is taped spirally with 2-inch Zo adhesive to a point equidistant below. If this does not seal the wound at all points, another layer is applied over the first. A small trocar is introduced through the tape into the site of the fracture, and the oozing evacuated as far as possible. Through the trocar, by means of syringe and tube, the cavity of the traumatized tissues surrounding the fracture is filled with 2% formaldehyde in glycerine. The limb is then placed at rest by means of a cast, splint, Buck's extension, sand-bags or whatever means may be indicated under the circumstances. Morphine is used as needed to control the pain, this being a variable factor; in some cases the injection seeming to inhibit the pain and others greatly increasing it. As a general rule the patient will complain of severe pain for about an hour after the injection, and after that less than is the rule under simple casting. This wound is aspirated at the end of 24 hours to relieve the tension of the fluid and again filled with the solution. It is usually not necessary to aspirate again under 48 hours, but this may be gauged by the pain. Severe pain after the first 24 hours is nearly always due to high tension of the fluid in the wound cavity, and calls for aspiration without further injection. The aspiration and injection are repeated at three-day intervals. Usually three and sometime two injections are sufficient, the determination of this being dependent upon the temperature curve. The high point of the temperature curve is about 99 after the third day, and cultures of the aspirated fluid are negative after 60 hours, pointing to an aseptic wound. Pain from edema, and the danger of an ischemic muscular paralysis is safeguarded by cutting the bandage across in as many places as necessary and then applying new tape over the cut portions. This provides plenty of room and saves removing the tape.

The theory of this method is based upon the principles worked out by Murphy in his use of this solution in joint infections. First is the anti-septic action of the formaldehyde. The glycerine solution, being highly hygroscopic, enables it to penetrate the tissues far enough to bring all portions of the wound in contact with the solution. Second is the production of a 98% local polymorphonuclear leucocytosis with a consequent coffer-damming of the lymphatic spaces. This latter is more strikingly illustrated in the joint involvements where there is the limiting membrane of the joint-capsule, but the action is the same in the periosteal structures and marrow. The infection is limited by the same process that obtains under the drainage method—that is, the blocking of the lymphatic channels by the white-cell debris, but to the natural resistance of the tissue is added the chemical irritation of the solution, so that the natural process is faster and surer. The contents of the cavity are thoroughly sterilized by the solution, so that there is no toxic product for absorption. The old solution is changed by the aspiration and injection, so that tension is avoided and the serus exudate drawn off as formed, actually providing an intermittent drainage.

The point to be made is that under this method at the end of three or four days you have to deal with a sterile wound instead of one which is starting to drain and will continue to do so for three to six weeks. It is much easier to arrange the proposition of fixation because you do not have to contend with the constant changing of dressings. If plating is indicated it may be done any time after the tenth day with the certainty that you are working in a sterile cavity, and that the screws will not work loose. If the wound is to be allowed to close it is usually solid after the third week, after which time the tape is removed.

The advantages of this method are that the site of the fracture is thoroughly sterilized; that the initial infection is more surely localized by the blocking of the lymphatic channels; that the comminuted fragments need not be removed, but remaining, sterilized, act like bone-chips as a basis for the later deposit in the formation of the callus; that in fractures seen late, the purulent character of the discharge is changed to flocculent serum, and will be found by culture to be sterile; that a compound, infected fracture may be changed within 72 hours to a simple, clean one, with a lower mortality and an improvement of the cosmetic results.

THE DIAGNOSTIC VALUE OF THE LEUCOCYTE COUNT.

Dr. T. H. McCarley, McAlester, Okla.

In this paper I shall not present an exhaustive consideration of every pathological condition with which a variation in the normal leucocyte count is associated, nor shall I enter into a discussion of those blood dyscrasias in which a differential count is essential to diagnosis, thus eliminating the anemias and leukaemias. I wish merely to call your attention to instances such as occur frequently in the course of general practice in which the knowledge of a leucocytosis or leucopenia makes an accurate diagnosis possible.

As a working rule, anything above 10,000 leucocytes per cmm. should be regarded as a leucocytosis, and below 5,000 as a leucopenia.

Leucocytosis occurs physiologically under three conditions. First, in the new-born the count runs from 15,000 to 20,000, and as high as 40,000 under the influence of the first feeding. Second, about 75% of cases of pregnancy are associated with a leucocytosis, averaging about 15,000.

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Third, digestion leucocytosis normally begins about one hour after a meal and reaches its maximum in three to five hours. The actual figure reached varies in different persons, the maximum often reaching 15,000 cells, but more usually not much over 10,000. In some this leucocytosis does not appear. It has been found that a highly albuminous diet has a much more marked influence upon this leucocytosis than does a diet of vegetables and fats. The absence of digestion leucocytosis in carcinoma of the stomach should be remembered as a valuable diagnostic symptom. Bonhoff states that in his fourteen cases of cancer of the stomach and in seventy-seven cases in the literature, there was no digestion leucocytosis in 90% of the total 91 cases. When a leucocytosis did occur during digestion the increase was only 1100 and 1400. On the other hand a positive leucocytosis was observed during digestion in all but three of the 15 cases of gastric ulcer examined. The increase was usually about 2,000, but it sometimes ran up to 5,000.

Pathologically leucocytosis exists under three conditions. Before taking up that classification, I shall enumerate a number of general causes. The necessity for keeping them in mind lies in the fact that each should be eliminated as a possible factor before ascribing the increase to a pathological condition. These are: The administration of ethereal oils, myrrh, turpentine, camphor, peppermint, quinine and other tonic drugs; the prolonged use of chloroform and ether; a cold bath; prolonged muscular exercise; shock, whether physical or mental; and injection of various toxins, such as tuberculin and autogenous vaccines.

The three classes of pathological leucocytosis are post-hemorrhagic, cachectic and inflammatory. Post-hemorrhagic leucocytosis is said to begin in from ten to fifteen minutes and may reach as high as 20,000 cells within an hour if the hemorrhage is acute and copious. In this connection I wish to report a case from the Journal A. M. A.* The patient presented every symptom of acute appendicitis except vomiting, though there was nausea. The white count was 22,000. A probable diagnosis of appendicitis was made. Ruptured extra uterine pregnancy was discussed and excluded on account of the absence of the external appearance of hemorrhage, the lack of a very rapid pulse and the high white count. The patient had never had children, the previous menses were normal and there was an entire absence of uterine bleeding between the regular periods. The patient was operated and showed a ruptured tube with moderately severe, intra-abdominal hemorrhage.

Cachectic leucocytosis is to be expected in all advanced cases of wasting diseases. However, in tertiary syphilis, advanced tuberculosis, nephritis and carcinoma, a leucocytosis, if marked, demands a search for a complicating infection.

But it is inflammation that we think of first when a leucocytosis is discovered. In nearly all cases of inflammatory nature and acute infectious and general febrile diseases there is an absolute increase in the leucocytes which runs more or less parallel with the temperature. To quote Webster, ***"In general it may be said that leucocytosis represents the reaction of the individual to the disease. A high count may mean a vigorous reaction to the infection; a low count may mean either a poor reaction and hence an unfavorable condition of the patient, or it may indicate a very mild degree of infection with a normal reactivity of the patient. The exceptions to the rule that acute infectious diseases are accompanied by a leucocytosis enhance its value in diagnosis. Measles, influenza, malaria, tuberculosis and

*Levison, Volume 44, No. 16, page 1294.

**Diagnostic Methods, page 492.

typhoid fever are never associated with a leucocytosis unless complications arise or conditions become very severe. In fact, in typhoid we usually find a leucopenia.

Allow me to cite instances such as we all encounter. I have seen an atypical case of broncho-pneumonia diagnosed and treated for a week as malaria. The white count was 20,000. I have seen a case of infection of the deep lymphatics of the neck and thorax treated for six weeks as typhoid; suppuration occurred and a long period of drainage was necessary. I have seen a case of appendicitis in which the surgeon hesitated for several days to operate, because typhoid was suspected. A white count would have eliminated typhoid in these two cases. Who has not seen the initial chill of pneumonia diagnosed malaria? A leucocytosis of from 12,000 to 20,000 is usually present at the time of the chill in pneumonia or immediately following. It is the custom among some excellent practitioners in the worst malarial districts in the South to make blood smears in every case of chill, not only for the purpose of searching for plasmodia but also for the purpose of estimating the number of leucocytes.

This superficial study of a very broad subject is offered not by a specialist in laboratory work, but by a general practitioner, who utilizes the laboratory to a limited extent as an aid to diagnosis. I am convinced that the leucocyte count is the most valuable in the whole range of clinical hematology. The technique is one of the simplest. When once the habit is formed of using the white pipette in every case in which the diagnosis is at all obscure the real value of the test is appreciated.

INTUSSUSCEPTION.

Dr. W. H. Livermore, Chickasha, Okla.

In view of the fact that intussusception is relatively rare in adults, I wish to report a case and give my anatomic findings. The patient, Mr. Cazey, was referred to me by Dr. Sanger of Blanchard, Oklahoma, June 29, 1915, suffering from obstruction of the bowel.

History: Age 20; family history negative; previous history negative with the exception of repeated attacks of so-called colic for the last four years. Two years ago he had what was diagnosed as appendicitis and was sick ten days, making a good recovery. Since then he has had several attacks of pain in the abdomen which would last but a short time. In November, 1914, he had a severe attack of pain in the abdomen, accompanied with fever which was diagnosed appendicitis. Operation was advised but refused. After a sickness of three weeks he was able to be up and around but has had repeated attacks of pain in the abdomen since.

May 27, 1915, he was referred to the Chickasha Hospital for operation for chronic appendix. I found the appendix lying in the right lower quadrant of the abdomen, completely separated from the cecum. Both ends of the appendix were rounded and smooth. In this separated appendix there was a fecal concretion the size of a bean, about the consistency of glaziers' putty. The cecum and ileum were free of adhesions. The mesentery of the ileum was so long that I commented on it at the time of operation.

One month from this operation he was brought back to me with signs of obstruction of the bowel. Six days before, after eating several green peaches, he had considerable pain in the abdomen and called a doctor. He was given a physic and the bowels moved freely. The pain continued and morphine was given. The next day more medicine was given to move the bowels and after several movements he was given morphine to control the

pain. The pain still continued and the next day they were unable to get bowel movements with cathartics and enemas were returned clear.

He was referred to me five days after the onset of his trouble. A mass the size of a man's head was palpable in the right half of the abdomen. On opening the abdomen this mass was found to consist of ileum invaginated into cecum and ascending colon. I could not free the invaginated bowel, so resected cecum and ascending colon together with the invaginated bowel and made a side-to-side anastomosis of ileum to transverse colon. On examining the resected bowel I found two feet of ileum in the colon and the invaginated loop was gangrenous. The patient made a smooth recovery with the exception of subcutaneous infection which opened the skin incision.

In this case I think the factors which had to do with the intussusception were long mesentery of the ileum, increased peristaltic movement brought on by irritation from green fruit and continued by purging. One of the interesting points is intussusception in a man of 20 years.

INTESTINAL OBSTRUCTION.

F. L. Carson, M. D., Shawnee, Okla.

In the consideration of intestinal obstruction we are confronted primarily by a wide divergence of opinion among those who have done experimental work in this condition as to the exact causation of the symptoms following an obstruction of the bowels.

Stone, Whipple, and Burheim (1) maintain that the phenomena usually observed are due to a toxin secreted by the cells of the intestinal mucosa, especially those of the duodenum, while Hartwell and Hoguet (2) insist that the symptoms are caused by the rapid depletion of the body fluids and that in the absence of any intestinal trauma life may be prolonged indefinitely by the parenteral administration of large quantities of water, Angus McLean (3), using the material in guinea pigs, found no toxin in the proximal loop, in the blood, nor in the gas from the distended loop.

However, from the standpoint of the clinician we are interested not so much in the etiology of the phenomena produced by the obstruction as we are in the best method of relieving the individual.

Whatever the cause may be, we have long been aware that after relief of the obstruction the symptoms will continue without mitigation and unless further measures are adopted the patient will succumb.

It is not my intention to discuss the various types of obstruction nor to go into detail as to their exact pathology, but to insist upon enterostomy in all forms which have existed for any considerable period of time. Some form of drainage of the contents of the bowel is indicated in all cases where the intestinal wall shows evidence of injury. This may be done by several methods: Simple puncture of the distended loop; production of an artificial anus by immediately opening the bowel; bringing a loop of gut out and doing the punctures later; or by draining the distended gut by means of a tube.

In the last few years it has been my practice to do an enterostomy at the first operation if the obstruction has existed for forty-eight hours, or if the proximal loop of the bowel shows evidence of injury as evidenced by an exudate on the surface or by hemorrhage into its walls. I have had the mortification of having to reopen the abdomen three times after releasing the obstructing bands.

In one other case, a hernia, which had become strangulated twice within twenty-four hours, followed immediately after the last reduction

by a radical operation under local anesthesia, showed ten hours later marked signs of obstruction. Upon opening the abdomen no mechanical interference with the intestinal current was discovered, but the small and large bowels were enormously distended as far down as the splenic flexure of the colon, below which the gut was flat. In this class of cases it is unwise to institute a prolonged search for the obstruction owing to the condition present, and the enterostomy is then performed on any convenient distended loop, care being taken to go as low as possible in the intestinal tract.

In a recent case of obstruction, following nineteen days after an operation for a typhoid perforation, such a condition was encountered, and on opening the abdomen the intestines were found matted together and greatly distended. The patient was in a very bad general condition and we proceeded to do an enterostomy in the manner described below. After about three days gas and feces began passing by the rectum and the patient was soon convalescent.

The method I have been using in the past three years is as follows: After the abdomen is opened the obstruction is searched for and, if found, the cause is removed if possible; then a loop of gut a short distance above the obstruction is brought up and clamped with rubber-covered forceps and a purse string suture placed on the anti-mesenteric border, including an area slightly smaller than a twenty-five cent piece. After carefully packing to protect the abdomen from pollution, an opening is made in the center of this area with a sharp knife; this is enlarged if necessary; a pezzet catheter is introduced by using an obturator to stretch and thereby diminish the diameter of the bulbar extremity. The purse-string is then drawn tight, taking care to invert the edges of the gut. This suture is reinforced by another still, further inverting the peritoneal coat much after the Mayo method of cholecystostomy, after which the clamps are removed. The purse string sutures are of very fine cat gut and the latter one is left long and is brought out of the abdominal incision at the upper angle, when, after the abdominal wound is accurately closed it is tied snugly over a gauze roll in such a manner that the visceral and parietal peritoneum are brought into close contact. Through the catheter, irrigation of the bowel is then instituted, using warm saline solution. This is repeated every two hours, the irrigation being discontinued in the interval to permit escape of the intestinal fluids and gases. The patient is placed in the Fowler position and proctoclysis kept up almost continuously until the general condition improves.

In removing the tube after it has served its purpose, cut it off about four inches from the skin, seize on two sides with forceps, introduce the obturator and at the same time pull on the forceps.

In six cases the resulting fistula have closed spontaneously in from three to ten days following the removal of the tube. The only difficulty that is encountered is in removing the bulbar extremity of the catheter, and care should be taken not to evert the intestinal mucosa wall.

1. Stone, Whipple, Burheim, *Annals of Surgery*, Vol. LIX.
2. Hartwell and Hogue, *American Journal of Medical Science*, Vol. CXLM.
3. Angus McLean, *Annals of Surgery*, Vol. LIX.



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DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

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THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL

THE CRIME OF PUERPERAL SEPSIS.

"Women in child-bed should never be attended by physicians who have been conducting postmortem sections or cases of puerperal fever."* So concluded Oliver Wendell Holmes in 1843. His conclusions aroused a storm of opposition from the then leading obstetricians of Philadelphia, Hodge and Meigs, and it was twelve years before he reiterated his conclusions, which gradually, as knowledge of bacteriology has progressed, have become immutable law. "One 'Senderein' has lessened the mortality of puerperal fever by disinfecting the hands with chloride of lime and the nail brush," said Holmes. This alluded to Semmelweis, who had observed that in the wards where medical students were directly admitted for the purpose of making examinations of women in the parturient state infection was vastly more common than in adjoining wards where admission of the students was not so ordinary. "This ward had acquired such a high mortality in puerperal cases that women begged in tears not to be taken into it." Holmes and Semmelweis had only their powers of observation and common sense to guide them; they were not blessed with the knowledge of the cause of infection as are the physicians of today—in fact, so unjust was the criticism of Semmelweis that he died prematurely from brooding over his wrongs from the hands of an unappreciative profession.

A brief examination of the returns of death in many cases in our own time and country must convince the student, even the casual observer, that not only are many of the physicians of today not using their ordinary powers of observation, but are neglectful in entirety of the finer teachings of bacteriology and its many modern blessings, utterly unknown to the

*History of Medicine, Garrison, W. B. Saunders Co., 1913.

physician of yesterday. Shameful as the admission is, there is no dispute that many of the men who are paid to render good service to unsuspecting mothers are grossly neglectful of the ordinary precautions for the prevention of infections. This neglect is so palpable on observation of their handling of cases at the bedside that one shudders as he admits that the Lord is good in most cases to his unfortunates and the wonder that there is not more is justified.

Speaking of our own State, one of the chief factors in the production of such infections is the ignorant midwife. So far our erudite legislators have not seen fit to curb by the simplest regulation, such as a simple examination as to fitness to assume the important post of accoucheur, these ignorant mortality producers who go blithely and ignorantly about their errands of disaster. Our lawmakers might at least enact a law requiring the midwife to carry to each case a placard reading, "In you, oh boiled water and soap, will I place my faith. I know not of bichloride, lysol or carbolic, or such new-fangled foolishness, but I do know you are good dirt-removers." The midwife is excusable because she does not know. There is no excuse for the physician who is constantly having infections on his hands; the fault is his and his alone. After he is licensed the expectant mother has no relief from his noxious presence, so this message, which is nothing more than reiteration of what should be the commonest knowledge to all, is written in the hope that it may arouse a moment's consideration.

WORKMEN'S COMPENSATION LAW EFFECTIVE SEPTEMBER FIRST.

Oklahoma's Compensation Law becomes effective September 1st, and on account of the possible effect it may have in certain circumstances, on physicians' and surgeons' charges for services rendered injured employes covered by the terms of the law, it should be closely read and studied by all physicians, especially those living in industrial and mining centers.

The law covers all employments "where more than two are employed, except farm, ranch or dairy service or retail mercantile pursuits."

"Accidental personal injuries arising out of and in course of employment and such disease or infection as may result therefrom," etc.

"Written notice must be served on employer and Commission within 30 days."

"Such medical aid, including crutches, apparatus, etc., as may be necessary, by employer during fifteen days after injury. Charges for such treatment are subject to regulation by the Commission, and limited to those that prevail in community for similar treatment of persons of like standard of living."

"Injured employes must submit to medical examination from time to time if requested by the Commission, as may be provided by its rules. Insurer and employee may have their respective physicians present. Refusal to submit forfeits right to compensation."

It will be seen from the above few excerpts that the physician is going to be vitally interested in the event he is in attendance on a person covered by the law. At this time the Commission, which has only recently been appointed by the Governor, has not had time to adopt the rules applicable to the medical fees to be charged. It is to be hoped that in making up the schedules they will not follow the farcical lead of some of the older states having similar laws. In some of these states the charges are so low that they may be said to savor of the tip, rather than moderate compensation for service rendered.

PERSONAL AND GENERAL NEWS

Dr. W. E. Seba of Leedy, visited St. Louis in July.

Dr. R. J. Dice of Randlett, has moved to Byers, Texas.

Dr. C. F. Halm has moved from Tulsa to Sand Springs.

Dr. Ellis Lamb and family, of Clinton, spent July in Colorado.

Dr. Sam McKeel of Sallisaw, had a dislocation of the foot in July.

Dr. Howard C. Weber, Bartlesville, spent August in New York City.

Dr. T. H. Flesher, Edmund, is visiting the Panama Pacific Exposition.

Dr. Z. J. Clark of Cherokee, visited San Francisco in July and August.

Dr. Jesse L. Blakemore, Muskogee, visited with his son in Virginia in August.

Dr. George R. Blickensderfer, Maud, died very suddenly in that place recently.

Dr. D. Long of Duncan, visited the Chicago clinics during August and September.

Dr. N. B. Breckenridge, formerly of Stonewall, has located in Merida, Yucatan, Mexico.

Dr. T. E. Ashinhurst, Waurika, recently had an operation for appendicitis in El Reno.

Dr. W. N. John, Hugo, has returned from a six weeks' visit to the New York Polyclinic.

Dr. W. L. Kendall, Enid, Superintendent of the Institution for Feeble Minded, is doing special work in Chicago.

McCurtain County Medical Society met July 27th in Broken Bow. Dr. C. R. McDonald read a paper on pellagra.

Dr. Andrew Struble, Pauls Valley, had a narrow escape from death lately, when his house was struck by lightning.

Dr. Phil Herod, formerly of Alva, has located in Oklahoma City, where he will specialize in eye, ear, nose and throat work.

Mr. J. C. Kendle, formerly private secretary to Mayor Whit M. Grant, Oklahoma City, has been appointed chief clerk to the State Commissioner of health.

Dr. Charles B. Hill of Guthrie, has been appointed Superintendent of the State Hospital for the Insane at Ft. Supply. Dr. Hill succeeds Dr. E. S. Newell, resigned.

Dr. C. A. Johnson, Kiowa, who had an operation for appendicitis and gall-stones in McAlester, July 4th, went to Manitou to recuperate and from that place to Chicago, where he will do some special work in pediatrics and obstetrics.

Dr. C. E. Clymer, Oklahoma City, was seriously injured lately when his machine was struck by a locomotive. An operation was performed shortly after the accident, which he stood well and it is reported that he will probably recover.

Dr. A. E. Abernathy of Altus, received some painful injuries and narrowly escaped death at Grandfield, in a railway collision on the Wichita Falls and Northwestern railroad. This is the Doctor's second accident on that road.

Dr. J. B. Rolater, Oklahoma City, has been made the defendant in a \$30,000 damage suit by Fred Kunze. The plaintiff alleges a remarkable number of injuries as is usually done in these cases. An operation for appendicitis is the basis of suit.

McIntosh County Medical Society met in Checotah, August 10th. Dr. J. C. Watkins, Checotah, presented a pellagra clinic; Dr. P. J. Vance, a paper on "Medical Ethics," and Dr. W. A. Tolleson of Eufaula, a paper on "Furuncle, Felon, Carbuncle."

"Mark White," a gentleman who has heretofore received some notoriety through the columns of the Journal of the American Medical Association, was placed under arrest in Tulsa in July, charged with practicing medicine without a license. The arrest was made under direction of Dr. R. V. Smith, Secretary of Board of Examiners.

CORRESPONDENCE AND MISCELLANEOUS

Tulsa, Oklahoma, August 11, 1915.

Dr. Claude Thompson, Muskogee, Okla.

Dear Doctor:—In my paper on "Tuberculosis," read before the Section on General Medicine at Bartlesville in May of this year, on page 101, third line from top, the word "Parental" was substituted for "Parenteral," which if not corrected would throw an entirely different light on the subject. Thanking you for the correction, I am,

Fraternally yours,

H. C. CHILDS, M. D.

Scranton, Pa., August 4, 1915.

Dr. C. A. Thompson, Secretary.

Dear Sir:—Please accept my very hearty thanks for the copy of your Cancer Number, and also let me thank you again in behalf of our Committee and our State Society for your very generous and helpful assistance in this connection. I wish it were possible to write a personal letter to each editor who has so kindly assisted, but under the circumstances you will appreciate the fact that this is out of the question. The very high type of articles appearing in all the journals also makes it impossible for any individual mention. I hope that the matter has proved satisfactory to you in every way and I hope that you will feel well repaid in many ways for having helped to make this movement such a distinct success. I will tabulate all the work done and present it to our State Society this fall, and I will be very glad indeed to send you a copy of our report.

With kindest regards, I am,

Yours very truly,

JONATHAN M. WAINWRIGHT.

SOME CANCER CORRESPONDENCE.

Muskogee, Okla., June 9, 1915.

Dr. W. E. Fitch, Editor, New York City.

Dear Doctor:—Referring to your letter enclosing abstract of article of Dr. Silas P. Beebe on treatment of inoperable cancer: Without considering the merits of the treatment, which every physician naturally hopes will prove successful, though doubting the wisdom of publication of report based on two cases so treated, I would like to ask if you were advised that a spectacular article along the same lines would be published in Hearst's Magazine so soon after the substance was offered medical journals for publication?

You will admit, I believe, that the whole matter savors of some of the sensationalism that has gone before and follows closely the plans of some of our past National failures in that respect. I refer specifically to Friedman, Pirorkowski (Turtle), Tuberculin and Twilight Sleep. I believe that physicians are the ones that will have to administer Dr. Beebe's Autolysin to patients, and can see no fair reason for placing it before the public in its present obvious immaturity through the medium of a lay publication. I believe, too, that the patient with cancer, operable cancer, is going to reason "If that cures inoperable cancer, it will cure my cancer; I will try that before I allow that surgeon to mutilate me with an operation." The immeasurable danger to such patients is also obvious. It may be that after he has tried out a few such remedies as this is alleged to be that he will find himself long past human aid from a condition which, if operated early, might have been permanently cured.

I hope to know that some one has taken advantage of you in this matter, as I certainly would have felt that I had been taken advantage of had I taken advantage of your invitation to make favorable comment on the abstract you sent me.

Please do not take this as too critical, but it is prompted by my belief that we should stand together in such matters.

With best wishes, I am,

Very truly yours,

C. A. THOMPSON, Editor.

New York, June 19th, 1915.

Dr. Claude Thompson, Muskogee, Okla.

Dear Doctor:—Your favor of June 9th just received acknowledging an abstract of an article by Dr. S. P. Beebe on the treatment of inoperable cancer. I have read your criticisms and beg to advise as follows:

First.—You will understand that the abstract could not report all of the cases contained in the original article which was published in the New York Medical Journal for May 15th. I will say in passing that hundreds of cases have been treated, and for more than two years this treatment was subjected to the most critical tests in that only inoperable and incurable cases were accepted for treatment. The results in a majority of cases were highly pleasing and satisfactory. In some instances the patients who had come to the hospital with a dictum of their family physician "hanging over them;" that they could only live two or three months, have taken treatment and been restored to what they themselves termed "good health." Every evidence of their former deplorable condition has disappeared and they are still living now after twelve and eighteen months. Drs. Beebe and Beveridge are conservative, but they are satisfied that they have observed every evidence of clinical recovery in many cases.

I observe what you have to say about the sensationalism referred to Friedman, Piorkowski, etc. You must remember, my dear Doctor, that when any discovery of great importance is known that the newspapers will get it and you had just as well try to turn the current at Niagara as to control the press.

Kelly of Baltimore, surgeons in Washington, Philadelphia and this city are referring patients to Beebe and Beveridge upon which they have exhausted their skill. These patients are being treated with "Autolysin" and are being relieved. J. Walter Vaughan of Detroit, Mich., came down to New York and spent a week with Beebe and Beveridge and I am told that he returned to Detroit and has now under his personal observation more than thirty-five patients all of whom he reports are doing well. I could go on giving you names of men prominent in the profession who are using "Autolysin" and who feel that they are not being "taken advantage of." I am of the opinion that when you take the trouble to investigate this subject thoroughly, and from men who are above reproach, that you will change your mind as outlined in the letter of above date.

Trusting this will help to clear up some matters for you and to hear from you further, I beg to remain,

Very truly and sincerely yours,

W. E. FITCH, M. D.

Muskogee, Okla., July 11, 1915.

Dr. W. E. Fitch, Editor, New York.

Dear Doctor:—Your letter of 19th has been unanswered on account of my absence in California. I am glad to understand that the abstract sent us was not based on the two cases mentioned; however, the reader had nothing else to be governed by in making up an opinion on that phase, as they were the only one noted.

We all bow, of course, to the judgment of Kelly and men of his high ability and experience, but I cannot understand that they will (excuse the premature publication to the laity of such matter). I cannot believe they will ever condone the publication of such matter in any lay publication. Physicians must be the ones to use "Autolysin," not hysterical readers of Hearst's Magazine. The most intelligent of them, unless they are physicians, are by the very nature of things unable to grasp the finer distinctions of a medical article, hence the futility and harmfulness of such publication to them. In my mind's eye, I now see the cancer victim hurriedly seeking out this newly lauded measure for application to her operable cancer—cancer that might easily be cured by early and prompt operation—on the theory that if it will cure inoperable cancer, it might cure the operable. I think I see it doing more harm than Ochsner's Starvation Treatment of Appendicitis. That treatment killed many a patient on account of misapplication by the attending physician, who applied it to cases Ochsner would have immediately operated. True that is not Ochsner's fault or a fault of his treatment, but the human tendency to dodge the knife, coupled with an agreeable attendant, has cost us many lives and I believe now that the result of the Hearst article of June on Beebe's Autolysin with be an Hegira to New York City of timid physicians with their more timid patients. I fear that it will be similar to a part of a "movie" I once saw depicting the far North, entitled, "Many Go, But Few Return." At any rate it cannot possibly have had a legitimate place in Hearst's at this time, and, in this instance, the press could have been controlled. Some one knowing all about the alleged facts, a physician at that, must have given the article impetus and I believe they will hear about it most forcefully, not from Oklahoma, but from the profession of New York City.

The whole thing has such distinctive ear-marks of "things that have gone before" that, did I know you better, I would suggest that you would not write me your letter of June 19, 1915, on June 19, 1916. Time will solve these matters and I hope the solution will show that I am hopelessly and ignorantly wrong and that you are right.

With best wishes, I am,

Very truly,

C. A. THOMPSON, Editor.

Hotel Athenaeum, Chautauqua, N. Y., July 26, 1915.

Dr. C. A. Thompson, Muskogee, Okla.

My Dear Doctor:—Your letter of the 12th has been forwarded to me. I think your reply to Dr. Fitch excellent.

I am sending you the special cancer number of the N. Y. Medical Journal in which my article, "The Cancer Patient's Dilemma," appears. I think this article is germane to the questions you raise; you will also find reference to the Beebe-Horowitz cure. In the last number of the American Medical Journal there is an editorial on the same subject which states the facts very clearly. You have doubtless seen the disclaimer signed by the Board of Management of the N. Y. Polyclinic Medical College. The whole affair is most unfortunate. I hope to go West this fall to see the Fair and meet some of you hustling, all-round, western physicians. You may wish to reprint the enclosed "Articles of Faith"* in your journal.

With best wishes, I am,

Cordially yours,

WM. SEAMAN BAINBRIDGE.

Baltimore, Md., July 15th, 1915.

Dr. C. A. Thompson, Muskogee, Okla.

Dear Dr. Thompson: Your letter of July 12th to Dr. Kelly, in reference to the use of Beebe's "Autolysin," lies before me. Dr. Kelly is in Canada on his summer vacation, which accounts for my answering this letter.

I should say that we have sent no case to Beebe that has been cured. We have, to the best of our ability, had this so-called treatment investigated and question whether it is of any value whatever. This, however, is simply a personal opinion after a short investigation in New York and it may not be correct. It is perfectly certain that no results have been obtained that would justify the extravagant articles in the press which have appeared. Personally I would not keep a patient, who was wild to go there, from going, but I would not have the slightest inclination to send one. Believe me,

Sincerely,

CURTIS BURNAM.

New York, August 1, 1915.

Dr. C. A. Thompson, Secretary, Oklahoma State Medical Association, 507 Barnes Building, Muskogee, Oklahoma.

My Dear Dr. Thompson:—Your letter of July 12th, and the copy of letter sent to Dr. Fitch, are both interesting. I do not know what to say. I am terribly discouraged about this question of newspaper publicity. It looks to me as if we were fast approaching a condition of affairs which will become so intolerable that perhaps some of those not now interested may suggest a plan of control, or if this is not done conditions may become much worse.

The publicity given to certain features of medicine by the lay press is most annoying to the general profession, and frequently to those who are advertised, but as long as the newspapers employ medical men as members of their editorial staff, and instruct those men to search the medical journals, even to the extent of getting the medical journals' articles before they are published and putting them into the lay press, what are we to do? We cannot prevent the copying from a medical journal into a lay journal. That is entirely beyond the control of the man who writes the medical article, and medical men who are employed by those journals must, in order to hold their positions, put the material out early and in a so-called entertaining and interesting manner, or they will lose their positions. Efforts to control in this direction have so far been absolutely unavailing. I do not advocate or endorse the methods, but I have seen so far no adequate remedy proposed. If the men themselves put the articles into the lay papers, then perhaps the Society could expel them, but

*See page 143.

where Dr. Vaughan, for instance, is quoted in a lay journal and has no more to do with it than Dr. C. A. Thompson, how are you going to punish Dr. Vaughan? It is simply impossible to keep "Twilight Sleep" out of the papers. It is impossible to keep the Kelly and Abbe Promulgation of Radium out of the papers. I do know that the mass of the profession in New York do not approve of this publicity, but I am sorry to say that there are a great many who do not object seriously when their own praises are sung.

Sincerely yours,

WISNER R. TOWNSEND, Secretary.

P. S.—Dr. Fitch is not a member of the Society, nor is Dr. Thorne, the Medical Director of the New York Times.

PARONYCHIA.

Isadore Seff and S. Berkowitz, New York (Journal A. M. A., July 17, 1915), describe a technic for operating an paronychia which they have used in a series of 300 cases and which not only relieves the pain but also shortens the disease and prevents disfigurement. Acute and chronic cases are treated alike. The finger is first placed flat on the table and with the eye part of the probe held at right angles to the finger nail, the cuticle is very slowly pushed backward along its entire extent until the proximal portion of the nail appears. In some cases soaking the finger in hot boric acid solution facilitates this step. It is important to push backward against the cuticle and not downward against the nail, as in the acute cases the latter procedure is always painful. The probe is hooked under the diseased nail at the proximal portion, the edge of the nail is cut longitudinally for a distance of one-eighth inch and each side of the cut edge grasped with either forceps or an artery clamp and the nail is cut transversely, the corners being completely removed. Pain is seldom produced, as the inflammation has separated the proximal portion of the nail from its bed. Attempts to remove more than this separated portion of the nail are very painful and the distal portion is left untouched to protect the underlying nail bed and is later forced off by the new growing nail. A wet dressing of boric acid solution is applied and the patient instructed to bathe the finger if it becomes painful in hot boric acid solution every three or four hours. An analysis of the cases is given. The Staphylococcus pyogenes was the predominant infection. Eighty-five per cent of the patients had no pain during the entire operation, 15 per cent had only a little discomfort. No anesthesia, local or general, was required in any case and dressings were removed in from ten to fourteen days.

MAY PREVENT BLINDNESS.

Springfield, Illinois.—(Special)—A bill designed to minimize blindness was introduced in the house today by Representative William G. Thon of Chicago. The measure has the backing of the state board of health and medical organizations. It was referred to the judiciary committee.

Under the provisions of the bill a report must be made to the state board of health of all cases where infants are born blind or with sore eyes within six hours after a physician has discovered that this condition exists. It provides for free distribution of silver nitrate for treatment of such cases.

This is one of the best bits of legislation ever offered. We are for it to a finish. When such legislation has become general throughout the land, hundreds of children will be saved from incurable blindness and thousands of dollars will be saved to the taxpayers.—Child Betterment Journal.

SEE THAT YOUR POLICY PROTECTS YOU.

The Defense Committee reports a recent instance of an attempt by the attorney of a casualty insurance company to compromise a malpractice suit against one of our members. The Defense Committee advised the member not to compromise. We urge our members to exercise considerable caution when they buy protection of this kind. No company should be allowed the privilege of compromising a suit without the consent of the insured, and their attorneys should not urge it. See that your policy protects YOU. In the case referred to above the member did not consult the Defense Committee when the suit was filed because the company's attorney advised against his doing so. The Defense Committee, however, when it learned of the plight in which the member was placed advised with him, and not only succeeded in preventing the compromise, but had the case thrown out on a demurrer.—Jnl. Mo. State Med. Assn.

QUININ AFTER OPERATION.

In the Journal A. M. A., Aug. 7, 1915, Edmond Bonnot and A. H. Cleveland, St. Louis, describe a modification of a method of administering quinin salts, a preliminary report of which was given in The Journal, Jan. 9, 1915. "Quinin Muriate, 10 grains, dissolved in 2 ounces of water at 100 F., is given by rectum immediately after operation, followed by saline proctoclysis or (in septic cases) by 6 ounces of olive oil. The quinin is repeated every six hours for from 4 to 6 doses. In large or stout individuals, the first 2 doses are given four hours apart. In case the saline proctoclysis is used, it should follow the quinin in about thirty minutes for best results." The postoperative backache has been practically eliminated and only about 2 per cent suffer any gas pain to speak of, and if so one enema relieves. The postoperative nausea and vomiting are less frequent and reduced in duration, though vomiting occurs. Frequently a single stomach wash ends all nausea and vomiting permanently. Postoperative thirst is delayed, and is absent in 60 per cent. The patient usually has a free bowel reaction within twenty-four hours when morphin has not been given. The treatment is of special advantage when there is very much trauma, and did not interfere with pregnancy in a pregnant woman. It has been used in only two cases following chloroform. One did nicely but in the other it had to be discontinued as cyanosis appeared. When it is used after chloroform, the authors advise waiting until the patient has regained consciousness. Patients feel comfortable after operation, and morphin is seldom if ever required. Sodium bromid, 20 grains, was associated with each dose of pinin in fifteen laparotomies with good results, and seemed to reduce the nausea and vomiting. The beneficial action of the bromid so administered was especially marked in eight goiter cases. The only complications observed were cinchonism in three cases, and one case of drug eruption lasting three days; but the patient did not suffer at all.

PHYSICIANS AND PUBLICITY.

The following editorials from the Columbus Dispatch and the St. Louis Times shows how other cities try to control newspaper advertising by doctors and some of their troubles in the process: "Every profession has its code of ethics and every other profession respects it. But occasionally such codes contain regulations that infringe on the rights of others. Such a condition has arisen from an arbitrary action of the Columbus Academy of Medicine, which in a laudable endeavor to prevent the commercializing of the medical profession, has laid down certain rules concerning publicity. But in framing these rules the academy has ignored another profession as ethical as its own and can not hope to secure the co-operation in many of the features laid down in its new book of discipline. Recently, the Dispatch was flooded with courteous letters from Columbus physicians, all couched in practically the same phraseology—suggesting a form letter—requesting that the writer's name not be used in connection with news items and explaining a recently adopted ruling of the academy to the effect that the use of a physician's name in connection with a news event of any kind would be deemed prima facie evidence that such publicity had been sought and that the burden of proof would rest upon him. Until there are not more physicians on the board of education or board of health, in city council or in public service of any kind, until physicians cease to marry, die or figure in auto accidents, until injured persons no longer need medical attention, until physicians rid themselves of all family connections and draw themselves into such seclusion that they no longer stand out in prominence in social, political or fraternal life, the Dispatch will be constrained to ignore this ruling of the academy of medicine and use its own good judgment in printing the news.

"On May 25, the St. Louis Times drew attention to the fact that Dr. Woodson was 'fired' from the presidency of the State Medical Association because he had dared to buy and pay for a little space in a newspaper. We expressed the hope that the better class of physicians in Missouri would take another view of the matter, and now we are glad to give publicity to the fact that the association has reinstated Dr. Woodson at its head. We have no defense of quacks, whether they are in or out of the ethical crowd. We have a defense, however, for the free press of the United States against the doctor who is perfectly willing to gumshoe his way into the columns of the said press so long as it is free to him."—Lancet Clinic.

ADVERTISING BY PHYSICIANS.

Following the midwinter conference on public health, legislation and medical education of the American Medical Association, held in Chicago, February 23 and 24, numerous news items and editorial comments appeared in the public press regarding one of the papers presented at the conference. The substance of the newspaper items

was that the American Medical Association was considering the revision of its principles of ethics with a view to removing or modifying the restrictions placed on individual physicians as to personal advertising. Some of the reports stated that revision of the principles of ethics would be taken up at once, and that an overwhelming majority of members of the association were in favor of such a change. So far as we know, says The Journal of the American Medical Association, there is no intention or indication of any change in the position of the American Medical Association on this question; the reports in the newspapers were due to a misapprehension of the character of the paper in question and the intent of the writer.

The paper was an argument for a better understanding and closer co-operation between the medical profession as an organization and the newspaper publishers as a class. The author did not advocate or discuss the question of personal advertising on the part of physicians; the proposition set forth and defended in the paper and presented to the conference was something entirely different from personal exploitation; it was a plea for closer co-operation between medical organizations and the press for the public good, and not for personal benefit. It suggested that the expert knowledge of the medical profession could be utilized by the public press in two ways; first, by the dissemination through the newspapers of scientific knowledge which would be of value to the public in preventing disease, and second, in placing at the disposal of those newspapers which desired it, the expert knowledge of the medical profession in separating worthy and reputable from dishonest and disreputable institutions which might seek publicity through the newspapers.

Of the two important activities one has already been inaugurated by the American Medical Association, and the other is worthy of serious consideration. Neither of them, however, has the slightest bearing on the question of personal exploitation of physicians through newspaper advertising or by any other means. An honorable physician could not conscientiously advertise for personal business, for the same reason that the honorable minister and lawyer would not advertise. A professional man has no commodity to sell; his only assets are his scientific knowledge and his personal ability; and he who claims to possess greater knowledge or greater skill than his professional associates—whether physicians, preachers or lawyers—is an egotist, or worse, and forfeits the respect of both his professional brethren and his fellow citizens.—Joplin, Mo., Herald.

TESTIMONY AS TO TRANSACTION WITH DECEASED PERSON.

4900—Henry M. Vance, etc. v. Hannah R. Whitten. McIntosh County. Reversed and remanded. Opinion by Bleakmore, C.

"No party shall be allowed to testify in his own behalf in respect to any transaction or communication had personally by such party with a deceased person, when the adverse party is the executor, administrator, heir at law, next of kin, surviving partner or assignee, of such deceased person, where they have acquired title to the cause of action immediately from such deceased person."

There are two rules by which future pain and suffering may be submitted to the jury. (1) If the injury is objective and it is plainly apparent, from the nature of the injury, that the injured person must of necessity undergo pain and suffering in the future, the jury may infer that fact from proof of such an injury alone. (2) But where the injury is subjective, then, to warrant a jury to return a verdict for future pain and suffering, there must be produced evidence by expert witnesses, that the plaintiff, with reasonable certainty, will experience future pain and suffering as a result of the injury—. 3. It is not competent for a party who, as a witness, testifies to his pains, to state his opinion that the injuries which caused the same are permanent.—Harlow's Weekly.

MME. MARIE DEPAGE, wife of Dr. Antoine Depage, Chief of the Red Cross of Belgium, lost her life in the Lusitania disaster. She had been in this country on a mission for the Belgian Red Cross, and with her was lost \$100,000 which she had collected for the Red Cross Needs of her country.—Western Medical Review.

AMONG THE 5,000 sailors on the interned German vessels in New York harbor twelve cases of insanity have been reported to the county medical authorities in Hoboken. Health Officer Dr. Joseph Stack says that 90 per cent of the interned crews suffer from anemia and are undernourished.—Western Medical Review.

"ARTICLES OF FAITH" CONCERNING CANCER.*

A Platform Upon Which to Unite in the Campaign of Education.

(1) That the hereditary and congenital acquirement of cancer are subjects which require much more study before any definite conclusions can be formed concerning them, and that, in the light of our present knowledge, they hold no special element of alarm.

(2) That the contagiousness or infectiousness of cancer is far from proved, the evidence to support this theory being so incomplete and inconclusive that the public need have no concern regarding it.

(3) That the communication of cancer from man to man is so rare, if it really occurs at all, that it may be practically disregarded.

(4) That those members of the public in charge of or in contact with sufferers from cancer with external manifestations, or discharges of any kind, need at most take the same precautionary measures as would be adopted in the care of any ulcer or open septic wound.

(5) That in the care of patients with cancer there is much less danger to the attendant from any possible acquirement of cancer than there is of septic infection, or blood poisoning from pus organisms.

(6) That in cancer, as in all other disease, attention to diet, exercise and proper hygienic surroundings is of distinct value.

(7) That, notwithstanding the possibility of underlying factors, cancer may, for all practical purposes, be at present regarded as local in its beginning.

(8) That, when accessible, it may, in its incipency, be removed so perfectly by radical operation that the chances are overwhelmingly in favor of its non-recurrence.

(9) That, when once it has advanced beyond the stage of cure, suffering in many cases may be palliated and life prolonged by surgical and other means.

(10) That while other methods of treatment may, in some cases, offer hope for the cancer victim, the evidence is conclusive that surgery, for operable cases, affords the surest present means of cure.

(11) That among the many advances in and additions to cancer treatment, the improvements in and extensions of surgical procedure surpass those in any other line, and fully maintain the pre-eminent position of surgical palliation and cure.

(12) That there is strong reason to believe that the individual risk of cancer can be diminished by the eradication, where such exist, of certain conditions which have come to be regarded as predisposing factors in its production.

(13) That some occupations, notably working in pitch, tar, paraffin, analin or soot, and with X-rays, if not safeguarded, are conducive to the production of cancer, presumably on account of the chronic irritation or inflammation caused.

(14) That prominent among these predisposing factors, for which one should be on guard, are: general lowered nutrition; chronic irritation and inflammation; repeated acute trauma; cicatricial tissue, such as lupus and other scars, and burns; benign tumors—warts, moles, nevi (birth-marks), etc.; also that changes occurring in the character of such tumors and tissues, as well as the occurrence of any abnormal discharge from any part of body, especially if blood-stained, are to be regarded as suspicious.

(15) That while there is some evidence that cancer is increasing, such evidence does not justify any present alarm.

(16) That suggestions which are put forward from time to time regarding eugenics, dietetic and other means of limiting cancer, should not be accepted by the public until definitely endorsed by the consensus of expert opinion. Such consensus does not exist today.

*During the four-day Cancer Educational Campaign, held under the auspices of the Vermont State Medical Society, June 8-11, 1915, Dr. William Seaman Bainbridge, of New York City, presented the accompanying twenty-one "Articles of Faith" at several sessions. They form the conclusion of a paper entitled "THE CANCER PATIENT'S DILEMMA. A Plea for the Standardization of What the Public Should be Taught in the Campaign of Education Concerning Cancer," which Dr. Bainbridge read at one of the sessions, and which appears in full in the Cancer Number of the New York Medical Journal, July 3, 1915.

(17) That so far as we know there is nothing in the origin of cancer that calls for a feeling of shame or the necessity of concealment.

(18) That it will be promotive of good results if members of the public who are anxious about their health and those who wish to preserve it will, on the one hand, avoid assuming themselves to be sufferers from one or another dreadful disease, but, on the other hand, will submit themselves periodically to the family physician for a general overhauling.

(19) That at all times and under all conditions there is much to be hoped for and nothing to be feared from living a normal and moderate life.

(20) That the finding of any abnormal condition about the body should be taken as an indication for competent professional and not personal attention.

(21) That watchwords for the public until "the day dawns" and the cancer problem is solved, are:—Alertness without apprehension, hope without neglect, early and efficient examinations where there is doubt, early and efficient treatment when the doubt has been determined.

FRANK S. BETZ COMPANY EXPAND.

Considerable interest has been aroused in professional and trade circles by the rumor of changes in the personnel of the Frank S. Betz Co., of Hammond, Indiana. These rumors have been definitely confirmed by members of the Company. Mr. Frank S. Betz, who hitherto has been virtually the sole head of this large business, has felt the need of active assistance in the management of the affairs of the concern, and especially to carry out plans of extension along the many lines in which the company is interested. As a result, a coterie of business men, including many high in the financial and business world, have purchased a large interest in the company; and extensive plans are being formulated for the general extension of the business in every branch. Mr. Betz naturally remains with the company as President and Chairman of the Board of Directors. The changes will not affect the policy of the concern as to its methods of manufacturing and selling goods, but the infusion of new blood will mean greater activities and further extension in every way.

The growth of the Frank S. Betz Company is another illustration of the remarkable success that can be achieved by a man of untiring energy and devotion to his work. He has built up this large business practically unaided, without the assistance of outside capital or borrowed money. It really represents the earnings on his original investment.

The new members of the firm are fortunate to align themselves with an established business house that has never carried a dollar of indebtedness except current bills for merchandise. With such a reputation for financial integrity, the plans of the new management seem assured of success.

OKLAHOMA'S three state hospitals for the insane had on July 1, 2460 inmates, which is practically the capacity of these institutions. It has not been necessary, however, for any institution to turn away an applicant and the state authorities do not contemplate the danger of such a contingency. The new buildings at Fort Supply will be ready in about four months, and this will increase the capacity of that institution by 150. The inmates were distributed among the different institutions as follows: Norman, 1010; Vinita, 835; Fort Supply, 515.—Harlow's Weekly.

E. Novak, (Journal American Medical Association, January 9, 1915), states that atropine diminishes the irritability of the autonomic nerve endings in the uterus. His experience has been most encouraging by following the plan of Novak of Vienna by beginning just before menstruation three times a day a pill of 0.5 mg. of atropine. The results appear to be as satisfactory as when a solution is injected into the cervical canal without the danger of infection. He has frequently administered somewhat larger doses than that advised by Novak, and has found that patients who respond most favorably are those in whom the atropine has been pushed to the point of tolerance.—Western Medical Review.



REPORT OF EXAMINATION BY STATE BOARD OF MEDICAL EXAMINERS, AT OKLAHOMA CITY, JULY 13-14, 1915.

LICENSED BY EXAMINATION.

William Otto Fischer,	University of Louisville,	1915, 88%, Muskogee, Okla.
Stephen H. Graham,	University of Oklahoma,	1915, 83 1/2 %, Norman, Okla.
Elmer E. Carlington,	University of Oklahoma,	1915, 79%, Olustee, Okla.
Miles Leslie Lewis,	Baylor University,	1915, 87%, Ada, Okla.
Orange E. Welborn,	Baylor University,	1915, 86%, Woodville, Okla.
Albert L. Woods,	Meharry Med. Col.,	1909, 71 3/4 %, Ft. Smith, Ark.
Kirk Bentley Barb,	Oklahoma University,	1915, 84 1/4 %, Pittsburg, Pa.
Willis Kelley West,	Oklahoma University,	1915, 82 1/2 %, Oklahoma City
James J. Gable,	Oklahoma University,	1915, 89 3/4 %, Norman, Okla.
Ester Lee Jones,	Oklahoma University,	1915, 85%, Oklahoma City.
James Alonzo Campbell,	Oklahoma University,	1915, 76%, Oklahoma City.
Luther Loyal Turner,	Chicago Col. of Med.,	1915, 75 1/2 %, Muskogee, Okla.
Chesley M. Martin,	Oklahoma University,	1915, 86%, Fletcher, Okla.
Henry W. Maier,	Southern Methodist Univ.,	1915, 84 1/4 %, Hugo, Okla.
Harvey O. Randel,	Chicago Col. of Med.,	1915, 77 %, Muskogee, Okla.
William Allen Martin,	Oklahoma University,	1915, 83%, Cushing, Okla.
Karl A. Anderson,	Illinois University,	1915, 78%, Chicago, Ill.
Herman E. Yazel,	Ensforth Med. Col.,	1907, 83%, Oklahoma City.
J. Herbert Smith,	Missouri Medical College,	1887, 73 %, Tulsa, Okla.
Alba Jesse Whitley,	Leonard Medical College,	1913, 74%, Muskogee, Okla.

Rejected.

*Oklahoma University,	1915, 79%.
*Tennessee University,	1915, 81%. 1915, 78%.
	1914, 70 1/2 %.
*Arkansas University,	1913, 74%. 1912, 72%.
*Chicago Col. of Med. & S.,	1915, 75%.
Meharry Medical College,	1914, 54%.

*Failed in one or more subjects.

Licensed by Reciprocity.

Cecil Bryan,	Arkansas University, 1915, Ark.	Vian, Okla.
Wm. Joel Neal,	Nashville University, 1905, Ark.	Ft. Smith, Ark.
Edward M. Miers,	Kan. City Univ. Med., 1910, Kas.	Harper, Kas.
LeRoy Worth Kuser,	Baylor University, 1913, Tex.	Gainesville, Tex
William Douglas Oliver,	Atlanta Col. P. & S., 1912, Ga.	Brinson, Ga.
Roy F. VonCannon,	Kas. City Univ. Med., 1909, Tenn.	Memphis, Tenn.
Frederick A. Martin,	Tennessee University, 1907, Tenn.	Cumberland City, Tenn.
George J. Conley,	National School Osteo., 1901, Mo.	Kansas City.
Wm. Jugartha West,	Louisville University, 1894, Tenn.	Knoxville, Tenn.
Philip Ross Watkins,	Vanderbilt University, 1893, Ark.	Mena, Ark.
Solomon P. Roberts,	Richmond University, 1901, W. Va.	Kanawah, W. Va.
Thomas B. Felix,	N. Western Med. Col., 1893, as.	Downs, Kas.
Luther M. Calloway,	Washington University, 1910, Mo.	Pawnee, Okla.
George W. Evans,	Central Col. Osteopathy, 1912, Mo.	Pawnee, Okla.
Oscar E. Shewmaker,	Louisville University, 1907, Ky.	Lawrenceberg, Ky.
Wm. H. Strickland,	Meharry Med. College, 1903, Ark.	Little Rock, Ark.
John Wesley Stephenson,	Vanderbilt University, 1912, Ky.	Pikeville, Ky.
Henry Marcellus Johns,	Tennessee University, 1895, Tex.	Tecumseh, Okla.
M. C. McNew,	Dallas Med. College, 1902, Tex.	Ada, Okla.
Geo. Irwin Garrison,	Jefferson Med. Col., 1886, W. Va.	Oklahoma City.
Willis S. Michael,	Baltimore Col. P. & S., 1893, W. Va.	Collinsville, Okla.

Licensed by Re-Registration.

John S. Stults.

Robert I. Bond.

NEW BOOKS

In this department publications sent THE JOURNAL will be acknowledged as they are received. Reviews of new publications will be made only as space and time permit. Publishers are requested to bear this in mind in forwarding books, etc., for review.

A MANUAL OF THE PRACTICE OF MEDICINE. By A. A. Stevens, A. M., M. D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania, Lecturer on Medicine in the University of Pennsylvania. Tenth Edition, Revised. 12mo of 629 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Flexible Leather, \$2.50 net.

PRACTICAL MEDICINE SERIES, 1915.

General Medicine, Vol. 1. Edited by Frank Billings, M. S., M. D., head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury, A. M., M. D., Professor of Medicine, Illinois Post-Graduate Medical School. Illustrated; 399 pages, price \$1.50.

General Surgery, Vol. 2. Edited by John B. Murphy, A. M., M. D., LL. D., F. R. C. S., England (Hon.) F. A. C. S. Professor of Surgery in the Northwestern University; Attending Surgeon and Chief of Staff of Mercy Hospital and Columbus Hospital; Consulting Surgeon to Cook County Hospital and Alexian Brothers Hospital, Chicago. Illustrated; 602 pages, price \$2.00.

Eye, Ear, Nose and Throat, Vol. 3. Edited by Casey A. Wood, C. M., M. D., D. C. L., Albert H. Andrews, M. D., and William L. Ballenger, M. D. Illustrated; 384 pages, price \$1.50.

Gynecology, Vol. 4. Edited by Emilius C. Dudley, A. M., M. D., Professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago, and Herbert M. Stowe, M. D., Assistant Professor of Obstetrics, Northwestern University Medical School; Attending Gynecologist to Cook County Hospital. Illustrated; 234 pages, price \$1.35. The Year Book Publishers, 327 La Salle Street, Chicago.

These are a part of the 1915 series which will consist of ten volumes on subjects of general interest, two of which will be devoted to general medicine. The price of the entire series is \$10.00 per year. They consist of practical and critical reviews of late medical literature.

OPERATIVE GYNECOLOGY.

By Harry Sturgeon Crossen, M. D., F. A. C. S., Associate in Gynecology, Washington University Medical School, and Associate Gynecologist to the Barnes Hospital; Gynecologist to St. Luke's Hospital, Missouri Baptist Sanitarium and St. Louis Mullanphy Hospital; Fellow of the American Gynecological Society and of the American Association of Obstetricians and Gynecologists. Seven hundred and seventy original illustrations; six hundred and seventy pages; cloth; price, \$7.50. C. V. Mosby Company, St. Louis, 1915.

It is questionable if there was need at this particular time for a new work on Gynecology, but if one were to select a work on the operative features facing the gynecologist, he would certainly look with great favor on this work. Probably no book on gynecology has ever been more profusely or finely illustrated. The illustrations have the added attractiveness of originality and been drawn to fit the author's ideas of operative procedure. The technique of uterine fixation of the various types most used, the different plastic operations, the technique of hysterectomy, operative work for relief of malignancy, acute pelvic inflammations and every other phase of the work of a gynecologist is superbly illustrated. Indications for operations accompany each step considered. The author is to be complimented for the great care used in the preparation of his book which is evidenced on its inspection.

INTERNATIONAL CLINICS.

Volume I and Volume II, Twenty-Fifth Series.

Edited by Henry W. Cattell, A. M., M. D., Philadelphia, with the collaboration of Charles H. Mayo, M. D., Rochester, and other American and European authorities. Cloth, Illustrated, Price \$2.00 per volume. Noteworthy articles in this issue are: "The Treatment of Malignant Tumors with Electrical Methods," by Arthur F. Holding, New York; "Early Diagnosis of Paresis," by John E. Lind, Washington; "Thera-

peutic Value of Direct Transfusion of Blood in the Diseases of the Newborn," Victor D. Lespinasse, Chicago. This latter is a brief summing up of some of the practical uses and indications of transfusion. Lespinasse has done considerable pioneering in this field and speaks with authority and his conclusions are valuable.

Volume II: "The Orthopedic Clinic of Fred H. Albee at the New York Post-Graduate Medical School," written by P. G. Skillern, Philadelphia, makes this an extremely attractive volume, for every surgeon is interested in Albee's work. "Some Phases of Emetine Therapy," by Alfred S. Burdick, Chicago, will also prove interesting on account of the recent wide increase in the application of emetine to amoebic infections, especially in pyorrhoëa. "Chronic Habitual Constipation," by M. E. Smulker, Philadelphia, is devoted principally to the consideration of exercises, massage and special apparatus in the treatment of the trouble.

THE CLINICS OF JOHN B. MURPHY, M. D., VOLUME IV. NUMBER III.
(June, 1915.)

THE CLINICS OF JOHN B. MURPHY, M. D., at Mercy Hospital, Chicago. Volume IV. Number III. (June, 1915.) Octavo of 195 pages, 73 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Published Bi-Monthly. Price per year, paper \$8.00; cloth \$12.00.

The author's clinical talk on "The Diagnosis of Injuries of the Carpus" is a most complete and clear resume of this subject. He goes into detail on the diagnosis of fracture of the scaphoid and semilunar bones, as well as dislocation of the semilunar, giving a number of differential points in these troubles. He estimates scaphoid fracture between one and two per cent of all fractures. This is a trouble which the general practitioner often overlooks and calls sprain of the wrist. The etiology of this condition he claims is so clear that he is enabled to make a diagnosis by a description of the accident. He does not, however, fail to use other methods. Among them he lays great stress upon the X-ray, quoting Rovsing as stating that he preferred X-ray plate to a microscopic section in making a diagnosis of most bone lesions. This article is illustrated and upon its reader is obliged to make a deep impression. The employment of early treatment of these troubles means a useful wrist for the patient, whereas a lack of treatment means atrophy of the muscles and a permanent disabled wrist.

The clinical talk by Dr. William J. Mayo on "Unsuccessful Gastro-Enterostomy for Ulcer" is clear and concise. Dr. Mayo says gastro-enterostomy for gastric and duodenal ulcers gives a very small percentage of failures. He emphasizes the fact, however, that there should always be an ulcer before this operation is performed and that it is an unnecessary routine to close the pyloric orifice.

The subject of "Chronic Tendovaginitis" is also discussed. This article, with that on "Painful Exostosis of the Os Calcis," with Case Reports, are extremely valuable. He points out the fact that all spurs of the os calcis do not give pain and that many of the painful heels are due to bursitis before the spur forms. He gives a table of the varieties, frequency, etiology, symptoms, prognosis and treatment. There are also many other interesting articles in this issue. J. H. W.

1914 COLLECTED PAPERS OF THE MAYO CLINIC, ROCHESTER, MINN.

1914 COLLECTED PAPERS OF THE MAYO CLINIC, Rochester, Minn. Octavo of 814 pages, 349 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth \$5.50 net; Half Morocco \$7.00 net.

This work is, as the title indicates, a collection of the papers written by the members of the staff of the Mayo Clinic and published in the current medical literature in 1914.

In the first division of the book are the papers on the surgery of the alimentary canal. Several of these treating of diagnosis, including X-ray findings, are exceptionally good. The second division deals with the urogenital system. The larger part of this section is devoted to the consideration of renal cancer, associated with renal stone and with surgery of the prostate gland. The next division is under the heading of the ductless glands and is devoted entirely to consideration of the thyroid gland. The fourth division includes papers on the surgery of the head, trunk and extremities. Several of these deal with bone and joint affections. Following this is about fifty pages of papers on technique, and then two hundred pages on general subjects. About half of this last division deals with cancer.

The papers all show careful preparation and the arrangement is as good as is possible. The book is fully up to the high standard of the preceding volumes of the Mayo Clinic. P. P. N.

PREVENTION AND TREATMENT OF INFECTIONS.

By Oliver T. Osborne, A. M., M. D., Professor of Therapeutics and formerly Professor Clinical Medicine in Yale Medical School; Member of the Council on Pharmacy and Chemistry, American Medical Association. Published by the American Medical Association, Chicago, Ill.

This is a small, convenient-sized volume of 239 pages, an elaboration of articles which have been appearing from time to time in the Journal A. M. A. under the title, "Prevention is Greater Than Cure." We wish to emphasize the simplicity, directness and engaging style of the language of this work. Not many medical books may be read without effort of varying degree, but this one is as readable as a medical book can be. First principles are considered under "Some Factors in Immunity," then a chapter on "Vaccine Prevention and Vaccine Therapy," which is followed by chapters on the specific infectious diseases. It is a splendid contribution to recent medical literature.

PROPAGANDA FOR REFORM.

Gray's Glycerine Tonic.—The Council on Pharmacy and Chemistry reports that Gray's Glycerine Tonic Comp. (Purdue Frederick Company, N. Y.) is not eligible for admission to New and non-official Remedies because its composition is secret; because grossly unwarranted therapeutic claims are made for it; because the name of this pharmaceutical mixture does not indicate its chief constituent, gentian, and because its use is unscientific and a detriment to rational medicine. From the statements made in regard to its composition it appears that besides the alcohol, gentian is the only active drug present. Nevertheless the "tonic" is said to be good for no less than thirty-two diseases, ranging from amenorrhea to whooping cough. (Jour. A. M. A., July 10, 1915, p. 189.)

Liquid Petrolatum.—Liquid Petrolatum is sold under proprietary names such as Bakuröl, Interol, Med-O-Lin, Muthol, Semprolin, Whiteruss, Nujol and Stanolax. Nujol is put up by the Standard Oil Co., of New Jersey, and Stanolax by the Standard Oil Co., of Indiana. Probably before long each of the other Standard Oil companies will have its own name for liquid petrolatum—that is, if physicians will tolerate it. There is not excuse whatever for special brands of liquid petrolatum, so far as the medical profession and the public are concerned. But it is otherwise with those who supply the product. More can be charged for a product sold under a trade marked name and claims can be made which could not be made when the product is sold under its proper title, liquid petrolatum. (Jour. A. M. A., July 10, 1915, p. 175.)

Tongaline and Ponca Compound.—The Council on Pharmacy and Chemistry reports that Tongaline, Tongaline Tablets, Tongaline and Lithia Tablets, Tongaline and Quinine Tablets and Ponca Compound Tablets, products of the Mellier Drug Company, St. Louis, are ineligible for New and Non-official Remedies because their composition is indefinite and semi-secret; because grossly exaggerated therapeutic claims are made for them; because their names are misleading, and because their composition is unscientific and irrational. Tongaline is essentially a sodium salicylate mixture. Its name is derived from one of the asserted constituents, "tonga," an inert, long-discarded mixture of barks and herbs said to be gathered and prepared by Fiji Islanders. In addition, Tongaline is stated to contain blue cohosh, colchicum and pilocarpin. The amounts of the ingredients are not now declared. Neither is the composition of the Tongaline and Quinine and Tongaline and Lithia Tablets made known. Ponca Compound is a "female weakness" remedy in tablet form. The name suggests that "Ponca" is a medicinal substance and at one time "Ext. Ponca" was named as an ingredient. Now the tablets are said to contain extract of *mitchella repens*, *senecio*, *helonin*, *caulophyllin* and *viburnin*. Not only are no quantities given, but the character of *senecio*, *helonin*, *caulophyllin* and *viburnin* is not made known. (Jour. A. M. A., July 17, 1915, p. 269.)

Horowitz-Beebe Cancer Treatment.—Newspapers are giving much attention to a new "serum"—Autolysin—for the treatment of inoperable cancer. This had its origin in the publication of S. P. Beebe, formerly professor of experimental therapeutics at Cornell Medical School, of a system of treatment by "Alexander Horowitz, Ph. D., an Austrian biologist and chemist," and its trial at the General Memorial Hospital. The composition of the preparation is not disclosed as to quantities, but it is said to be made from *Menyanthes trifoliata*, *Melilotus officinalis*, *Mentha crispa*, *Brassica alba*, *Anemone hepatica*, *Viola tricolor*, *anthem*, *fructus colobithidis*, *lignum quassiae*, *Urtica dioica*, *radix rhei* and *hedge hyssop*. One critic of the matter has remarked that apparently the only ingredient which has been overlooked in the preparation of the new remedy was a rabbit's foot. Jour. A. M. A., July 24, 1915, p. 336.)

Echinacea.—This is one of the drugs which the Council on Pharmacy and Chemistry has found valueless. Confirming this, the chemists of a pharmaceutical house report that they were unable to detect the presence of any physiologically active substance in the drug. (Jour. A. M. A., July 24, 1915, p. 342.)

O'Neil's Malt Whiskey;
Mountain Valley Spring Water;
Stafford Mineral Springs Water;
Sa-Yo Mint Jujubes;
Houchens' "Family Physician";
Dr. Martel's Female Pills;
Quickstep, Frye's Remedy;

Gray's Glycerin Tonic.—A "Notice of Judgment" has been issued by the Federal authorities regarding each of the proprietary preparations named. Each was found to be misbranded under the Shurley amendment to the Federal Food and Drugs Act which declares it illegal to make false and unwarranted therapeutic claims for medicine. (Jour. A. M. A., July 24, 1915, p. 350.)

Caldwell's Syrup Pepsin.—Some of the claims made for this "patent medicine" are "Positive Relief for Constipation," "Dispels Colds, Headache, Fevers and all ills caused from Bad Digestion, Foul Stomach, Torpid Liver and Sluggish Bowels." While the name and the claims suggest the presence of pepsin, L. F. Kebler, the government chemist, reported that this nostrum is an aqueous alcoholic solution containing laxatives flavored with oil of peppermint and devoid of any appreciable amounts of pepsin. Regarding the laxative constituents the A. M. A. Chemical Laboratory reports that a senna preparation is the essential laxative constituent. (Jour. A. M. A., July 31, 1915, p. 447.)

Iodex.—Iodex (Menley and James, Ltd., New York) is said to contain 5 per cent of iodine; the advertising suggests that the effects of free iodine are to be obtained from the preparation, which yet is said not to stain the skin. It is also claimed that thirty minutes after inunction, iodine can be found in the urine. The chemists of the A. M. A. Chemical Laboratory on examination found that Iodex contained only about half the claimed amount of iodine, that iodine did not behave as free iodine and that after inunction of Iodex, iodine could not be found in the urine. Because of these findings and because of the unwarranted therapeutic claims made for the preparation, the Council on Pharmacy and Chemistry held Iodex ineligible for New and Non-official Remedies. (Jour. A. M. A., June 19, 1915, p. 2085.)

Venodine.—Venodine (The Intravenous Products Co., Denver) was stated to be "an Intravenous Iodine Compound" put up in ampules, each of which contains "28 grains of Sodium Iodine, 1-8 grain each of Beechwood Creosote and Guaiacol in a suitable vehicle, and excipients to enhance its compatibility with the circulating blood." The "Therapeutic Indications" were said to include "infectious diseases, such as syphilis, tuberculosis, bronchitis, bacteraemias associated with chronic and acute nephritis (Bright's disease), and other infections." The Council on Pharmacy found Venodine ineligible for New and Non-official Remedies because it was exploited under unwarranted and grossly exaggerated therapeutic claims; because neither the name nor the advertising matter indicated that it was a preparation of the well-known sodium iodide; and because the combination of two such similar substances as creosote and guaiacol is unscientific, adding mystery to the preparation without increasing its efficiency. (Jour. A. M. A., June 26, 1915, p. 2155.)

Calcreose.—Calcreose (Maytibie Chemical Co., Newark, N. J.) contains in loose combination approximately equal weights of creosote and lime. The advertising claims having been revised, the Council on Pharmacy and Chemistry postponed definite action pending submission of proof (1) that the large doses of Calcreose recommended furnish large amounts of creosote to the blood and (2) that patients taking large doses do not suffer from digestive disturbances, loss of nutrition, albumin in the urine or phenol urine as claimed. At the same time it was emphasized that this action did not indicate a belief on the part of the Council that enormous doses of creosote are necessary or beneficial in tuberculosis. So far, the Maltbie Chemical Co. has not submitted the required evidence. As the Council's postponement of a report has been made to appear as a quasi-approval, the Council voted to announce that Calcreose had been refused recognition because the therapeutic claims were exaggerated and unwarranted by the evidence. (Jour. A. M. A., June 26, 1915, p. 2155.)

Typhoid Vaccine.—Extensive clinical trial indicates that typhoid vaccine may influence the course of the disease favorably. The results indicate that, if used with discretion, typhoid vaccines do not harm. (Jour. A. M. A., June 26, 1915, p. 2139.)

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STATE MEDICAL ASSOCIATION.**

Annual Meeting, Oklahoma City, May, 1916.

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Next Meeting—Oklahoma City, October 11, 1915.

Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.

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PHASES OF PELLAGRA.*

Dr. Fred S. Clinton, Tulsa, Okla.

Gentlemen: It is not only proper but a pleasure to accept the courtesy of an invitation to present a paper to the Rogers County Medical Society today.

Your secretary was advised that the subject would be "Some Phases of Pellagra." It is not expected that anything new will be presented, but the most important phase, I think, to the physicians who live in and about Claremore is the possibility of pellagra, especially among many of those who seek the curative properties of your radium wells. Second: The paucity of practical material found in the average text books; and, third, the possible cause of this disease and its overshadowing economic importance.

It is hardly necessary to dwell on the first other than to disabuse our minds of the fact that this progressive, chronic, nervous disease characterized by dermatitis, gastro-intestinal symptoms and cerebro-spinal manifestations, is found not only in Europe and other remote countries, but actually exists in Oklahoma.

Much practical information may be secured from different articles written by Dr. George C. Mizell of Atlanta, Ga. The Thompson-McFadden Pellagra Commission, Twentieth Street and Second Avenue, New York City, working under an endowment, have this disease under investigation. A request addressed to them will bring reprints of the literature down to January, 1915.

Dr. Mizell of Atlanta, Ga., presents the following:

"The theory of linolin as the cause of pellagra may be stated as follows:

It is proposed: (1st) That when linolin predominates in the fatty food of an individual it is deposited in the tissues as linolin and linolyl compounds.

(2nd) That linolin and linolyl compounds, by virtue of their unstable nature, readily undergo oxidation in marked contrast to olein, palmitin and stearin, which are among the most stable organic compounds in the animal body.

(3rd.) That fat and fatty tissue containing linolin and linolyl compounds in excess are unfit for performing the functions designed for normal fatty tissue.

*Read before the Rogers County Medical Society, Claremore, April 5, 1915.

(4th) That the end products of oxidation in the case of linolin differ from those of olein, palmitin and stearin.

The only point that can be raised in opposition to either of the four propositions is in regard to the adaptability of linolin as a substitute for olein, palmitin and stearin in animal tissue. The difference in the chemical and physical properties of these fats seems to settle this question.

Bear in mind that this theory does not postulate the action of the neutral fat linolin as being a poisonous or toxic agent upon its entrance into the body, but that it gradually accumulates in the absence of other fatty food and when it is in excess in the fatty tissues and fatty compounds it renders these tissues and compounds unstable.

Nothing outside of our observations has been found upon which to base a conclusion as to just what period of time is required for this transition, but this period is evidently measured by years. Certain tissues undoubtedly retain their constituents longer than others. For example, it is reasonable to suppose that the residence of fat in adipose tissue is of longer duration than fat in the skin. Certain individuals may use up their fatty tissue and replace it more rapidly than others. The state of an individual's health also plays a part in the destructive and constructive metamorphosis of this tissue.

It appears that it is necessary for oil to be consumed for not less than a year and when the time has been so short there is always a history of excessive use. These patients have used the fat exclusively, and in many cases have seasoned boiled vegetables with it and have eaten much of fried foods.

Almost invariably the pellagrin admits that he eats more greasy food than any other members of his family. This is especially true when the pellagrin and other members of his family have previously enjoyed equal health.

In getting the history of oil consumption the past eighteen months should be covered. Much difficulty is occasionally experienced owing to the ignorance of some as to what they are eating. An intelligent patient states that he raises his own hogs and renders his own lard; denies visiting anywhere for any length of time. His wife supports these statements, yet it is finally shown that he has bought hogless lard for eighteen months prior to his first attack. An intelligent grocer states that he sends the lard from his own store, and never uses anything but pure lard. Upon request, he exhibits six empty buckets, only one of which is labeled "lard."

One significant point that may be mentioned here is that, except in children under one year of age, all pellagrins, about four hundred in number, that I have had the opportunity of making an investigation, have been cotton seed oil consumers. It is hard to believe that this association of oil consumption with pellagra is accidental.

We have recognized the fact that many people have consumed cotton seed oil in some of the various forms for years without apparent injury, and this has led to inquiry among our patients not suffering with pellagra as to how many were eating cotton seed oil and how long they were using it. The results were as follows:

Forty-eight per cent were users of cotton seed oil products.

Eighty per cent of them date the beginning of its use within the past three years.

Many of these patients showed symptoms of pellagra.

When we admit that the fat of the body has long residence therein, requiring months for any given area of fat to be utilized and replaced from

the food which enters the body; that adipose tissue may remain intact for months, or even years, it becomes clear that the pellagrin will be liable to attacks just so long as his adipose tissue contains linolin. Also, that by rapid reduction of the adipose he will become immune to attacks until the linolin is re-introduced into his body. Thus the period of accumulation or eradication becomes very variable according to the diet, health and individual disposition towards fat. We find such variations among our cases.

There is reason to believe that if linolin does not exceed a limited per cent in a mixture of fats it will, on account of the ease with which it undergoes oxidation, be utilized before the more stable fat, thus being removed from the body and not accumulating in harmful amounts.

"Just here it is interesting to note the physiological law which governs the deposit of fats. This law and this theory explain why the dermatitis is always more severe on the extremities and face when all parts are equally exposed to sunlight. Physiological compensation probably operates to reabsorb and transport the more liquid fats to the extremities, thus explaining the recurrence of dermatitis in these parts as long as three to twelve months after a previous attack, even though linolin has been excluded from the diet." In other words, Dr. Mizell believes this a bio-chemical poison.

The summary of the Second Progress Report of the Thompson-McFadden Pellagra Commission is as follows:

1. The large active foci of pellagra in Spartanburg County were found in and near the large centers of population, and particularly in the cotton-mill villages.

2. Children under the age of 2, adolescents for about five years following puberty and adult males in the active period of life were least frequently affected by pellagra. On the other hand, women from 20 to 44 years of age, old persons of both sexes and children from 2 to 10 years of age were most frequently affected.

3. No definite connection between occupation and the occurrence of pellagra has been found, although the high pellagra morbidity in the women and children points to the home as the place in which disease is usually contracted.

4. In the group of incident cases most thoroughly studied, evidence of close association with a pre-existing case was disclosed in more than 80 per cent.

5. A house-to-house canvass of the homes of over 5,000 people living in six endemic foci of pellagra failed to disclose any definite relation of the disease to any element of the dietary.

6. In these six villages new cases of pellagra originated almost exclusively in a house in which a pre-existing pellagrin was living, or next door to such a house, suggesting that the disease has spread from old cases as centers.

7. So far as we have observed, pellagra has spread most rapidly in districts where insanitary methods of sewage disposal have been in use.

8. Additional evidence has been obtained to support the conclusion that flies of the genus *Simulium* have nothing to do with pellagra.

9. Animal inoculations and the experimental study of intestinal bacteria have not yielded conclusive results.

10. The studies of the blood have shown a lymphocytosis in most cases, but have not disclosed any constant abnormality characteristic of pellagra.

11. There is no evidence of inheritance of pellagra.

12. The immediate results of hygienic and dietetic treatment in adults have been good, but after returning to former conditions of environment, most of the cases have recurred. In children, prognosis is very much more favorable.

The chronicity of the disease and the helplessness of its victims, and possible peopling of our institutions make of this a great economic problem which must be worked out. One suggestion with reference to treatment aside from the matter of proper feeding, nursing, improved hygiene, sanitation and symptomatic measures.

Dr. Mizell, in the *Journal Record of Medicine*, June, 1911, says: "We all agree that pellagra is a sort of intoxication. With a knowledge of the source of any intoxication, we have two lines of attack open to us; by a specific agent we eradicate the cause and protection of the organism against deleterious effects of the poison. I have already shown that sulphur antagonizes the oxidation of the linolin. Calcium given in combination with it is especially indicated, hence, as a specific agent, we give calcium sulphide. Given in doses of one-half, to two or more grains three or more times daily it shows its effect in a few hours. In fact, the results are so prompt that I would feel like claiming specific action without a knowledge of its chemical action. We began the use of calcium sulphide eighteen months ago and have never been disappointed in the results. Under its influence I have seen the stools reduced to normal; the redness of the tongue fade; the eruption on the hands disappear. The intense burning and pain so prominent in some cases yield readily (usually in less than twenty-four hours). One case where the eruption had been continuous for twelve months, although being treated by arsenic, was relieved of suffering in twelve hours, was out of bed in three days, and had no erythema in ten days. In all cases this drug is all that is necessary to relieve aggravated cases of simple pellagra. That it does not relieve all cases is due to the fact that some are complicated by a long standing gastro-intestinal lesion which antedates the onset of pellagra by a more or less period of time. In these cases we have a totally distinct condition to treat. Some of these cases were under treatment several years previous to development of pellagra, suffering from various affections of gastro-intestinal origin, which was probably a predisposing factor in the development of pellagra.

So, believing that in calcium sulphid we have an agent capable of combating the deleterious action, and enabling the organism to rid itself of linolin, we have only to deal with these complicated cases which need special symptomatic treatment in addition."

PELLAGRA IN OKLAHOMA AND THE COMPARISON WITH STATISTICS FROM ELSEWHERE.*

Curtis R. Day, M. D., Oklahoma City, Oklahoma.

My only apology for presenting this subject at this time is the hope of renewing the discussion of the etiology and treatment of pellagra, the hope that in the future more and better statistics may be kept, and that more and better work may be accomplished looking to the solution of the etiology and treatment of this malady. I do not except to add one thing new or original in this article for its is a compilation from start to finish.

The New York Post-Graduate Medical School was instrumental in the establishment of a Commission to do some original research work in localities where pellagra existed in great numbers. This Commission was

*Read before Section on General Medicine, Nervous and Mental Diseases, Bartlesville, May, 1915.

financed by Colonel Robert M. Thompson of New York City, and Mr. J. H. McFadden of Philadelphia, and was, therefore, known as the Thompson-McFadden Commission, and I shall give some quotations from a summary of a report of their work in Spartanburg County, South Carolina. This report includes the investigations done in the City of Spartanburg as compared with conditions in the rural districts. A few of the conclusions arrived at by this Commission are given as follows:

1. Pellagra shows a striking inequality of distribution in ten townships within the county, the township rate of prevalence per ten thousand of population varying from 0 to 71. The City of Spartanburg, with a population of 17,517, gave a rate of 49 per ten thousand against 34 per ten thousand for the remainder of the country.

2. Density of population, while showing a tendency to conform to the relative prevalence of the disease, does not alone offer an explanation of the geographic inequalities of its distribution within the county.

3. The cotton-mill village population gives a rate of prevalence of 104 per ten thousand against 19 per ten thousand for the remainder of the county, and against 16 per ten thousand for the rural sections alone.

4. The variations in the rates of prevalence in the ten townships are in a measure proportional to the presence or absence of a large mill-village population. Excluding the mill-village population, there is a still marked discrepancy between the townships, the rate of prevalence in the rural population ranging from 0 to 29 cases per ten thousand of population. The excessive prevalence among the farming classes is found in the townships which have a relatively large mill-village population.

5. The white population of the county gives a prevalence of 45 cases per ten thousand; the negro population a prevalence of 9.5 per ten thousand. Excluding the mill-village population, which is practically all white, the remaining white population still gives a rate of prevalence (25.2 per ten thousand) over two and one-half times that among the negroes.

6. The rate of prevalence per ten thousand for males in the county is 17; for females, 50.5. White males give a rate of 22.95 per ten thousand; white females, 87.5 per ten thousand; negro males, 3.9 per ten thousand; negro females, 14.9 per ten thousand.

7. The rate of prevalence among children under 10 years of age and among adults aged 45 years and older, is practically equal in the two sexes.

8. The rate of prevalence drops among males between the ages of 19 and 45 years, whereas for females there is a remarkable excess of prevalence between these ages.

10. The most significant fact with regard to occupation is the excessive prevalence of pellagra among women employed in housework.

18. Economic Status: In the majority of cases (85 per cent) economic conditions are poor and the disease is most prevalent among people of insufficient means.

20. Hygiene and Sanitation of Houses and Premises: The most insanitary condition found in the county is the absence of properly constructed privies. Outside of a part of the city of Spartanburg, which is supplied by a water-carriage sewerage system, there is no effective provision in the county for the proper disposal of human excreta. A second striking insanitary condition is the almost complete absence of effective screenings of dwellings. These two conditions present a situation highly favorable to the transmission of disease organisms eliminated in the excreta, both by direct contamination of food and person and by insects. This

situation is naturally aggravated in the mill-villages and small towns by the greater congestion of houses. The absence of effective screening for dwellings gives rise to conditions conducive to the possible transfer of diseases transmitted by biting insects.

The United States Public Health Service has also done considerable work along the lines as those conducted by the Thompson-McFadden Commission, and it is interesting to note that the conclusions of the one Commission are very similar to those made by the other. The United States Public Health Service concluded that all the evidence had a tendency to show that pellagra is due to a dietary in which some essential element is reduced in amount, or from which it is altogether absent, or to the use of a dietary in which the element is present in injurious amounts. We find from Dr. Joseph Goldberger's writings, in a letter to the Surgeon General of United States Public Health Service, that he arrives at similar conclusions, which are clearly set forth in the following quotation:

"In a paper published in the Public Health Reports of June 26, 1914, I called attention to certain observations which appear inexplicable on any theory of communicability. These observations show that although in many asylums new cases of pellagra develop in inmates even after 10, 15, and 20 years' residence, clearly indicating thereby that the cause of the disease exists and is operative in such asylums, yet at none has any one of the employees contracted the disease, though living under identical environmental conditions as the inmates, and many in most intimate association with them.

In order to obtain precise data bearing on these observations, Dr. Willets is making a careful study of the records of the Georgia State Sanitarium. These show that 996 patients admitted during 1910—excluding those that died, were discharged during their first year, or had pellagra on admission or within a year of admission—there remained at the institution after one year 418, and of this number 32, or 7.65 per cent. have developed pellagra since that time. Of the present employees of this asylum 293 have been in more or less intimate association with pellagrins and have lived in substantially the same or in identical environment as the asylum inmates for at least one year. If pellagra had developed among these employees at the same rate as it has among the inmates, then 22 of them should have the disease. As a matter of fact not a single one has it.

"The studies at the orphanage at Jackson show that on July 1, 1914, of 211 orphans 68, or 32 per cent., had pellagra.

"The distribution of these cases with respect to age developed the remarkable fact that practically all of the cases were in children between the ages of 6 and 12 years, of whom in consequence over 52 per cent were afflicted. In the group of 25 children under 6 years of age there were 2 cases, and in the group of 66 children over 12 years of age there was but one case. Inasmuch as all live under identical environmental conditions, the remarkable exemption of the group of younger and that of the older children is no more comprehensible on the basis of an infection than is the absolute immunity of the asylum employees."

The Georgia State Sanitarium has given a report of 27 cases of pellagra that were treated in the wards following the ideas expressed by the investigation of these different Commissions, and it is indeed interesting to note that of this number they report 4 designated as recoveries, 13 improved, 3 unchanged, and 7 died. The treatment outlined for this number of cases is simply one of diet, and I shall quote the menu prescribed for these patients:

For breakfast: One or two eggs, one-fourth pound fresh beef (usually fried as steak), wheat roll, coffee with milk and sugar, frequently oatmeal with milk and sugar, and an additional 8 ounces of milk.

For dinner: Fresh beef (one-fourth pound, either roasted, boiled, or fried), Irish potatoes, rice, onions, squash, and any green vegetables that

could be obtained, such as cowpeas and cabbage. Wheat bread daily; corn bread twice a week; coffee with milk and sugar.

For supper: One or two eggs, wheat bread daily, coffee with milk and sugar, and an additional 8 ounces of milk as desired.

In their report of these cases they conclude by stating: "It is evident that the arsenicals at present so much in vogue may be dispensed with without harm, if not actual benefit to the patient."

For comparison with these reports let us look at conditions as we find them in Oklahoma. The only statistics available are those to be found in the death reports on file in the office of the State Commissioner of Health. We are unable to secure any data whatsoever regarding the surroundings from whence these patients came. We have tabulated so as to include the different occupations, as well as race and sex, and the county from which each patient came.

We follow with a list of counties, population of same, and number of cases of pellagra shown from each county:

County—	Population.	Deaths.
Adair.....	10,535	2
Beckham.....	19,699	2
Bryan.....	29,854	3
Caddo.....	35,685	3
Cherokee.....	16,779	1
Choctaw.....	21,862	3
Cleveland.....	18,843	3
Comanche.....	41,489	1
Craig.....	17,404	2
Creek.....	26,223	2
Custer.....	23,231	1
Garfield.....	33,050	1
Garvin.....	26,545	1
Grant.....	18,760	1
Grady.....	30,309	1
Greer.....	16,449	2
Harmon.....	11,328	1
Haskell.....	18,875	4
Kay.....	26,999	2
Kiowa.....	27,526	2
Johnson.....	16,734	1
Latimer.....	11,321	1
Le Flore.....	29,127	1
Lincoln.....	34,779	5
Logan.....	31,740	2
Love.....	10,236	1
McClain.....	15,659	1
McCurtain.....	20,681	2
McIntosh.....	20,961	3
Marshall.....	11,319	3
Murray.....	12,744	1
Muskogee.....	52,743	10
Oklahoma.....	85,232	15
Oklmulgee.....	21,115	3
Payne.....	23,735	1
Pittsburg.....	47,650	9
Pontotoc.....	24,331	2
Pottawatomie.....	43,595	9
Roger Mills.....	12,861	1
Rogers.....	17,736	3
Seminole.....	19,964	5
Sequoyah.....	25,005	3
Tillman.....	18,650	4
Tulsa.....	34,995	1
Wagoner.....	22,086	3
Washita.....	25,034	2
Woodward.....	16,592	1

	Males.	Females.	Totals.
Whites	28	77	
Black	5	22	
Indian	1	1	
	34	100.....	134

Between the ages of (As many as are designated in list):

	Males.	Females.
10-20	4	6
20-30	2	20
30-40	2	19
40-50	4	25
50-60	5	15
60-70	7	7
70-80	4	1
80-90	1

Summary as to occupation:

Housewives	57	
Farmers	18	
Servants	10	
Actress	1	
Students	2	
Teachers	2	
Laborers	2	
Plasterer	1	
Nightwatch	1	
Dressmaker	1	
Merchant	1	
Drayman	1.....	97
No occupation given.....		37
		134

Of those designated, the above tabulation shows 25 from the country, and 69 from town.

(Above listed statistics on Pellagra are shown as for year beginning January 1, 1914.)

If we hope to accomplish anything of value in our research work we **must have more statistics**; we must know something about the cases **while living**. If we could study the cases in this state today, getting the data similar to that given in the report from the Thompson-McFadden Commission, and, in addition to this, if we could find out about the kinds and amount of diet taken by each case, the mode of living, together with a general topography of the county where each case is found, and **compare this with like conditions of those not affected**, we might at least hope to get additional information on the subject, even though it be negative. If the theory that improper diet is the cause of pellagra is correct, might not it be a good idea to know something about the soil analysis in communities where pellagra is most prevalent, and compare this with like soil conditions where it does not exist? If some element is lacking in the food substance, is it not possible for such a shortage to come from an imperfect vegetable development due to imperfect soil conditions?

I believe it will be necessary for us to make comparisons of hygienic conditions in communities where pellagra DOES NOT EXIST as compared with conditions where IT DOES EXIST in order that the statistics as compiled by the various Commissions at the present time may be of value. While we are thus speculating, I would like to ask the question: MIGHT NOT THE ETIOLOGY OF PELLAGRA AFTER ALL BE A LACK OF IMPERFECT METABOLISM DUE TO SOME DISTURBANCE IN THOSE MYSTERIOUS INTERNAL SECRETIONS?

LOCAL ANESTHESIA.*

Dr. D. E. Little, Eufaula, Oklahoma.

Whoever procures exemption from physical suffering may be considered a public benefactor and in no other field of labor has there been a better chance of earning such a title than in producing local anesthesia for the relief of pain in surgery. But, as a general rule, a large percentage of operators have made a failure of local anesthetics and have discarded and condemned them. While this paper will not be an exhaustive treatise on the subject, I will endeavor to make it as plain and practical as possible and give all the information that will be required to handle local anesthetics successfully.

The late discovery of certain drugs or chemicals having the power of anesthetizing limited areas by local applications and hypodermic injections was an event but little less notable than the discovery of chloroform and ether.

While we may fully realize that the use of local anesthetics is responsible for the high development of present day conservative surgery, the entire absence of prejudice against general anesthetics is shown by the favor which nitrous oxide gas and chloride of ethyl have found, and in the ardent support which has been given them by those who are familiar with their sphere and proper mode of administration.

The degree of perfection which has been reached in the technique, making possible the performance of extensive operations, under local and regional anesthesia, is one of the most noteworthy advancements made in surgery during the last decade, and while it may be true that the perfect anesthetic has not yet been discovered, it is even more probable that we come short of the full benefits that might accrue from the perfect application of those now at our command.

The extent to which the field of local and regional anesthetics has been developed, and the constantly enlarging range of their applicability, as evidenced by the remarkable performances of those who have acquired accurate, precise methods, is often a surprise to physicians who are brought face to face with the work that is actually being done, and especially to those who perhaps had never recognized the possibilities of a proper technique.

The fear of poisoning the patient, is a relic of the days in which strong solutions of cocain were advocated, and a somewhat well marked inclination on the part of some surgeons to cling to the first part of the adage: "Be not the first by whom the new is tried, nor yet the last to cast the old aside," is doubtless responsible for a certain amount of skepticism and actual, or at least professed disbelief, regarding the possibility of operating painlessly, and successfully in serious cases, without general anesthesia; yet, when confronted with facts in proof of this assertion, theoretical arguments to the contrary are distinctly out of place and deserve no more than passing consideration.

On the other hand, when we consider that nine-tenths of the medical profession has no conception of the work which constitutes the daily routine of the remaining tenth, it is not strange that a certain degree of incredibility should exist among those whose attention is for the first time directed toward this marked advancement, nor that as the demand for special services increases, a lively interest is manifested by the more progressive element of the profession to which the public must look for whatever progress is made in matters relating to the prevention and cure of disease.

*Read before McIntosh County Medical Society.

There is no specialty in medicine in which local and regional anesthesia are more attractive and more applicable than its use in minor surgery, and the enthusiasm of some of its more ardent advocates is responsible, perhaps more than anything else, for the impression which prevails in some quarters, that all surgery done under local anesthesia is minor surgery.

The several methods by which local anesthetics are employed and the development of the technique differing somewhat from that formerly in vogue, necessitates some distinction between the various terms used to designate certain plans of procedure, some difference between the principles involved and certain limitations of the effect produced.

Local anesthesia is a term used in connection with methods which have for their object the desensitizing of certain areas directly affected by the injection of certain agents into them, producing the desired result either by the direct action of the anesthetic used, or by pressure caused by the liberal injection of certain fluids which so compress the nervous equipment of the parts that pain is not felt when they are incised or otherwise manipulated.

Regional anesthesia is the term used which defines the condition produced within the area supplied by certain nerves when such nerve trunks are anesthetized by peri-neural infiltration and the resulting compression, or by the direct action of the anesthetic on them, thereby depriving the entire area to which their branches are distributed of sensation. Regional anesthesia is an adaptation of spinal anesthesia, differing only from it in the locality to which it is applied. It is also known as nerve blocking.

In the development of technique which is now considered most satisfactory, several details have become recognized as contributing beneficially to the general result. Of these the principal are the use of weak, rather than strong solutions, their combinations with certain vaso-constrictors, and the proper anesthetization of the skin itself by endermic injections.

As the scope of local anesthesia has been extended into realms once considered far beyond any possibility of expectation, it has brought about a more thorough appreciation of the undesirable features associated with the use of cocaine, indispensable although it was, for a long time.

Even now it is doubtless the most popular, but it is not the safest nor the best local anesthetic, and whatever claims may be made in favor of it as preferable to some of the more recent chemicals produced for similar purposes, are probably due to its priority of introduction, for there are others fully, if not more, efficient, less irritant and less toxic.

The chief disadvantages of cocaine are that it is toxic, exerting its influence to an alarming degree at times, and when least expected, and the difficulty of securing a solution absolutely sterile, because it is decomposed and rendered inert by heat.

Beta-eucain lactate was one of the first substitutes for cocaine offered to the profession, and for short operations fulfills all the requirements of an agent intended for the production of local anesthesia. It is said to be one-fourth as toxic as cocaine. One of its disadvantages is that it acts more slowly and its effects disappear more rapidly than other preparations of this class. Solutions of beta-eucain can be sterilized by boiling, and for operations that can be completed in a few minutes it is preferable to cocaine.

Stovain, of which much was expected on account of its apparent splendid action in spinal anesthesia, has never given the results others claimed to have obtained. In several cases there was apparently no anesthetic effect when used in sufficient quantity to secure benefits of infiltration, such as might have been obtained from sterile water alone.

Alypin is a drug which exerts its anesthetic action upon mucous surfaces when topically applied, and when injected into the tissues produces anesthesia quite rapidly, the effect continuing from five to ten minutes, according to the strength used. It is said to be much less toxic than cocaine and solutions of it may be boiled for sterilization. No evidence of irritation have been noticed during the period of anesthesia, but after the effect passes off some patients complain of a burning sensation which is sometimes quite marked. When used alone it acts as a vaso-motor dilator, and, as a result, an annoying oozing of blood is liable to continue for some hours. This can be corrected by the addition of adrenalin.

Quinine and urea hydrochloride has been a much-lauded harmful local anesthetic, and during the last few years has become quite popular among certain physicians. My experience has not been very satisfactory, and I find if too strong solutions are used there will be considerable sloughing which may give distress to the patient and worry to yourself. I have discarded it for which I consider the ideal local anesthetic, of which I will speak later.

Phenol and Ethyl Chloride are ideal anesthetics to anesthetize the skin surface prior to introducing your hypodermic needle. They are not satisfactory where one has much cutting to do.

All of the foregoing drugs have, in my opinion, been surpassed by novocain, a local anesthetic which seems entirely free from irritating effect and but one-sixth as toxic as cocaine. Aqueous solutions are permanent and can be repeatedly sterilized by boiling without impairing the activity of the drug. Its action is very prompt and the anesthesia produced continues for an unusual period, especially when used in combination with adrenalin—in fact, its behavior in this particular is remarkable, for the addition of adrenalin increase the degree and the duration of its anesthetic action to such extent that a complete anesthesia of the parts is frequently observed after an operation of more than twenty minutes duration is completed.

In the regional anesthesia, when one is fortunate enough to deposit the solution in very close proximity to a nerve trunk, complete sensory paralysis has been observed an hour after injection. That these results can be secured with perfect safety—in fact, without any deleterious effect whatever—is a matter of so great importance that its value cannot well be overestimated.

Anesthesia of limited areas, produced by infiltrating the tissues with sterile water, was quite popular a few years ago, and for small incisions it answers the purpose very nicely, but when a considerable area is involved there is more or less after pain on account of the distention caused in parts which do not drain toward the line of incision.

Sterile, normal salt solutions is suitable for operations which last but a few minutes. It is less painful than water, but is more transitory in its effect, as, being isotonic with the fluids of the body,, it is absorbed more quickly.

For infiltration anesthesia, the well known Schliech solutions are quite well adapted, and preferable to sterile water or salt solution. They contain a minimum of cocaine and as far as my experience warrants an opinion, no unpleasant after effects may be feared. Since the introduction of novocaine, however, there is little advantage in having a variety of other combinations at hand, for this latest addition seems to respond to every requirement.

In addition to the foregoing anesthetics, there are a few which are especially adapted for topical application, and for these frequent use will be found in the routine of the average practitioner. The best of these is anes-

thesin and orthoform. They are employed as dusting powders, as a rule, although they may be incorporated into ointments or suppositories.

The technique for producing local anesthesia and the steps necessary are at this date quite well known to most physicians, yet perfect success is largely dependent upon familiarity with the proper technique and careful attention to details. The initial prick of the needle is so trifling that there is little occasion for providing against the momentary pain it causes. If considered advisable, however, the spot may be touched with a minute quantity of pure phenol or a chloride of ethyl spray may be directed toward it.

Where it can be done, a fold of the skin is caught up between the forefinger and the thumb and the point of the needle is quickly thrust into, but not through, the skin and a few drops of the solution immediately injected. This at once produces the blanched bleb or wheal that indicates anesthesia of the part. As soon as it appears the needle is carried a little farther and more solution injected, always injecting ahead of the needle point, until the entire area of the proposed incision is desensitized.

With the needle still in position (within the skin, not under it), it is withdrawn just sufficient to permit the syringe to slightly elevate and the point directed downward, when it is again inserted deeper and a few more drops injected. This done, it is again partly withdrawn, then again directed toward the deeper structures and an additional injection made. This procedure is repeated until the point of insertion is reached, after which the needle is withdrawn, having anesthetized the entire area with a single puncture of the skin. Should the syringe need refilling it can be done without removing the needle by simply detaching it in the usual manner. Over distention on the tissues must be guarded against. It is one of the most frequent causes of post-operative pains and may cause sloughing. In determining upon the particular method best suited for various operations, several points should be considered. Before proceeding to operate under local anesthesia, the nerve distribution to the parts involved should be reviewed. If there is little tissue to be divided this may perhaps be unnecessary, but attention to this feature as a matter of routine is good practice. Much of the ineffectual action of anesthetics that is reported, is doubtless due to lack of care and attention to detail.

The temperament of a patient is no small factor in determining the sum of the results obtained under this method. With a patient moderately calm and courageous, or one who is of the phlegmatic temperament, little disposed to exertion or excitement, a moderate degree of anesthesia is quite as effective as twice or thrice that would be, in one whom the nervous temperament was dominant. Numerous insertions of the needle should be avoided, especially when no tissue is to be removed, as every puncture made is liable to become infected and later on develop into an irritable spot that remains after the line of incision has been fully repaired. In operating upon boils, abscesses, felons, etc., where you find the skin very sensitive, it is best to make your first injection of the anesthetic some distance away from the affected part. By so doing you can work up to the spot to be incised with very little inconvenience and completely desensitize the part to be operated upon.

For a practitioner to attempt to open an abscess, felon, etc., without the use of a local anesthetic shows a lack of doing good practice and "up-to-dateness." It is a procedure that has been discarded as a relic of barbarism. People like to be relieved of pain and when a patient enters my office with an affection needing a local anesthetic I approach the ordeal with complete confidence that I will be able to operate upon the part without any pain to the patient and feel that my patient will be grateful for the time

and trouble I have taken. I can do better work and more thorough than in the days gone by, when a patient entered one's office and you took a scalpel, seized the patient in the half-nelson and proceeded to stab and thrust and all the time wrestling the patient over the office, waiting for an opportunity to stick him again.

In nose and throat work, where application is made to the mucous membrane, I prefer from four to ten per cent, depending upon the amount of surface I wish to operate on and the temperament of my patient. In urethral work I prefer a ten per cent solution of cocaine. I find that the local application of cocaine on mucous surfaces is much less dangerous than by injection, and in my hands I obtain much better results than with any other local anesthetic. For other work I prefer one-half to one percent novocaine, with adrenalin and a formula made up as follows:

Cocain Hydro, Gr. 80, or novocain, Gr. 20; Atropine sulp., Gr. 3-10; Chloral Hydrate, Gr. 20; Phenoresorcin, Gr. 1-2; Aqua Cinnamon, q. s., oz. 4. Mix and filter through absorbent cotton until clear.

The above formula represents four per cent of cocaine and one per cent of novocain. In having these formula compounded you should have it done by some one who is careful and competent and see that the drugs are fresh and pure. I have this formula compounded by the Greiner-Kelly Drug Co., of Dallas, and it has proved very satisfactory. I have used the solution when it was five years old and obtained as good results as when freshly prepared. Atropine given in small doses, as in this formula, is a cardiac, respiratory and spinal stimulant and tends to counteract the effects of the cocaine more than any other remedy we possess. By the term Phenoresorcin is meant a mixture of carbolic acid and resorcin, sixty-seven parts of the former and thirty-three of the latter. The mixture crystalizes on cooling and by the addition of ten per cent of water. Phneoresorcin is not only an efficient and valuable antiseptic and local anesthetic, but is indispensable in localizing the anesthesia and preventing the constitutional absorptions. It also aids in preserving the preparation. While a common cocaine solution is almost worthless in a few weeks, this preserves the preparation for months and years. Chloral hydrate has a marked anesthetic action and assists the other remedies in localizing the anesthesia. Aqua cinnamon is made as follows: Oil cinnamon, Gtt. 6; Glycerine, Dr. 1; Aqua Dist., q. s. oz. 4. Mix and filter through absorbent cotton until clear. This makes an aromatic solution and also assists in preserving the preparation.

There is a right and a wrong way for everything and if the operator will follow the instructions given and observe the following "pointers" I will assure him that he will always be successful. First, always operate under aseptic precautions. Second, use a glass syringe and keep it aseptic and in working order. Third, take plenty of time and never get in a hurry. Fourth, always operate more slowly on weak, nervous and sickly people than you would on the robust. Fifth, be sure you inject the anesthetic in the proper place and no unnecessary quantity. Observe these rules and I am sure you will be able to do good work and your patient will always feel grateful.

Some like their whiskey straight,
Others like pretty women and champagne,
But deliver me from one and all,
And give me a doctor that relieves my pain.



SURGICAL ANESTHESIA.*

Dr. T. Craig Burns, Oklahoma City, Okla.

The agents producing surgical anesthesia must possess the following properties, namely: Produce universal insensibility; be readily introduced into the circulation, thus producing its effects gradually and progressively so that its action may be under control; it must produce such a loss of motive power so that the most delicate surgical operation may be performed; its action must in no way interfere with respiration, circulation or other vital processes, and, lastly, as soon as the anesthetic is withdrawn the whole organism shall return to its normal function.

During an anesthetic considerable attention must be paid to the degree of the patency of the nasal, oral, pharyngeal and laryngeal channels through which the respiratory current enters and leaves the lungs. It is impossible to overestimate the importance of efficient respiration, as it is necessary for efficient circulation. When we have any degree of obstruction then the venous system begins to show signs of over-fullness and we may have swelling of the tongue and adjacent parts; the veins at the site of the operation bleed more freely and the pulse changes in character. Also we note changes in the breathing which, under no disturbing influences had been regular and quiet, but now becomes quicker, more stertorous, and often irregular.

When once the patient has been brought well under the influence of the anesthetic the respiration may usually be made to vary with the quantity of the anesthetic, the degree of obstruction and amount of traumatic stimuli.

In order to maintain a proper level of anesthesia the anesthetist must be guided by the respiration, lid reflex, state of the pupil, strength and frequency of the pulse, the color of the face and lips and the rigidity of the muscles, as many times we are unable to take one or two of these signs as demonstrating the degree of anesthesia.

In deciding upon the drug to be employed for producing anesthesia, one of the most important considerations should be the safety of the patient, taking careful consideration of the age, sex, habits, nature of operation, preparation and physical condition.

Every patient before undergoing an anesthetic for a surgical operation should have his heart and lungs examined thoroughly, and the urine should be examined both chemically and microscopically, as in many cases where the urine is strongly acid it should be brought as nearly neutral as possible, as I believe it helps to prevent an acidosis following operation.

When a patient is placed on the table preparatory to starting the anesthesia, I strap a phonendoscope over the heart so that at all times during the operation I can keep track of the heart's action. No one is allowed to handle the patient during the induction stage and all unnecessary noise is eliminated.

Of the three principal drugs producing anesthesia, I wish to consider ether and nitrous oxid, merely mentioning chloroform. In ether we have a cheap drug which is relatively safe in inexperienced hands. During its induction period we have frequently suffocating sensation which in a great many instances produces excitement stage.

Ether, on account of its irritant effect, throws considerable strain on the kidneys and, due to its forming a chemical union with the blood, its

*Read at Bartlesville Meeting, Oklahoma State Medical Association, May, 1915.

elimination is very slow. It hinders phagocytosis, which is a very important objection in a septic case. The postoperative vomiting is very distressing, being caused, I believe, to the swallowing of ether-laden mucous in the induction period.

On account of the irritant effect of ether to the mucous membrane, we have more or less mucous to contend with, especially when the patient has not had a preliminary dose of morphine and atrophine. In these cases I have seen cyanosis quickly relieved by placing in the throat a mucous tube which is similar to Young's perineal drain.

Now as to Nitrous Oxid Oxygen anesthesia. Let us first consider its few advantages, namely: The cost is much more than ether. Not being able, in all cases, to give pronounced relaxation, but by adding a very small amount of ether, this is overcome. The difficulty of administration, as it requires a trained anesthetist.

On the other hand you have a patient losing consciousness after the first five or six inhalations; no excitement stage, suffocating sensation or irritant effect on the genito-urinary tract; rapid recovery from the anesthetic and with a clear mind and lack of dread for future anesthesia. Post-operative nausea and vomiting practically nil, as the records of the hospitals show, that 90% of the patients given nitrous oxid oxygen in the induction period with ether afterward did not vomit, but that between 70 and 80% given straight ether have vomited.

In the beginning of a nitrous oxide oxygen anesthesia, rebreathing should not be used until the lungs are fully cleansed after six to ten inhalations. We may then start it. Sometimes in the management of a difficult case the gas may be given under positive pressure by keeping the bag slightly overdistended.

Ether may be added to the nitrous oxid, but not until the patient's respiration has been stimulated by rebreathing; then it is given. During the course of an hour's operation not more than an ounce or ounce and one-half is necessary to give the best results.

The reason why we use rebreathing is to prevent acapnia or a deficiency in the carbon dioxide content of the blood. Henderson has been able to reduce animals to a state of extreme shock by over-ventilation of the lungs. He asserts that acapnia causes osmotic changes in the tissues, resulting in the passage of water from the blood into the lymph and into the tissue cells, and dilation of the finer veins. Interference with the normal filling of the right side of the heart by this process is the essential phenomenon in surgical shock. It must be accepted whether we believe Henderson or not, that the accumulation of carbon dioxide by rebreathing stimulates respiration and circulation and with oxygen at hand and with care you obtain no deleterious effects from it.

During ether anesthesia, by the open method, we help to produce an acapnia, as ether diminishes the formation of carbon dioxide and by stimulating the respiration it hastens its elimination by ventilation of the lungs.

In a nitrous oxide oxygen anesthetic the patient must be watched very closely, as the changes come quickly and no cyanosis beyond the slightest tinge should be allowed. When ether is given in conjunction with nitrous oxide the patient should be kept pink.

The danger signals of a nitrous oxide anesthetic are irregular breathing, pallor or deep cyanosis, excessive secretion of mucous and convulsive movements.

LOCAL ANESTHESIA IN GENERAL SURGERY—THE PREVENTION OF AFTER PAIN AND SHOCK.*

Leigh F. Watson, M. D., Oklahoma City, Okla.

The phenomena of pain and shock has been known for many centuries, and clinically studied and classified by many ancient as well as modern surgeons. It is impossible to accurately estimate the degree of afferent nerve stimulation that is requisite to destroy life, because the shock value of every individual varies. While it is probable that shock value is largely a personal factor, or physiological function, it is nevertheless true that there are racial values as well as individual values. Some claim it depends on the state of the internal secretions and their balance. The hyperthyroid Swiss has a higher shock value than the Italian, and the lively Frenchman is more easily perturbed than the phlegmatic German. A person in middle age has a lower shock value than a child or an old person.

It has been shown that the shock value of an individual varies from time to time, and different parts of the body have different shock values. A blow below the belt will cause acute distress while the same blow on the chest will pass unnoticed. Another element is that of unpreparedness; a false step in the dark may momentarily shake the nerves of the strongest man. A piece of bad news or a terrifying sight produces a distinct psychic trauma or shock. Many people have indeed died of simple fright.

What we term shock is undoubtedly a defensive reaction of the automatic nervous system against assault that has been committed. If it were not for the protective influence of shock we would succumb more quickly and the reaction would be more intense than now occurs. It may fail at times, or even be too intense for the safety of the individual, but the fact remains that, as Crile has pointed out, the shock mechanism is one forged many generations ago in the history of the race, when some apparatus was necessary to secure instant preparation for flight or withdrawal on occasion of danger.

The most intense form of shock is commonly regarded as those cases of sudden death where there is no precedent disease—death by inhibition—death brought about by events that produce no obvious lesion, death following immersion in water before the patient has time to drown, death following a simple operation where the pulse and temperature remain normal until death occurs from respiratory failure. When on the other hand, shock falls short of immediate death, there may be profound shock for 24 to 48 hours, which terminates in death or gradual recovery. This is the common kind of shock, from which people suffer after serious injury or operation.

Shock also has relation to things just prior to operation. Disturbances of the mind just previous to operation are due to fear and anxiety. This is psychic shock. There are many other factors that indirectly produce shock. If the disease for which surgical intervention promises relief is one which effects the nervous system in a depressing way, any delay in operation will bring the patient to the operating room in a condition of shock. In these cases as in those where the operation is unexpected, the dangers of the unavoidable psychic, anesthetic and operative shock are naturally greater. This is usually evident in cases of intestinal obstruction and exophthalmic goiter, therefore, the earlier the diagnosis by the physician, the greater the success of the operation, both as to the local disease which demands a cure and the general nervous system which has to stand

*Read before Oklahoma State Medical Association, Bartlesville, May, 1915.

the trauma of the operative cure. There is a class of cases which, after the infliction of trauma, the subject displays emotional perturbation, rallies, seems to be doing well, and yet ultimately develops symptoms which may be unusually severe or terminate in death.

Crile states that the dangers from high blood pressure are embolism, thrombosis, angina pectoris and broncho-pneumonia. Low blood pressure may be either physical or psychic and is usually associated with shock, anemia or hemorrhage, which should be controlled before the operation.

When hysteria continues after trauma, the patient will probably recover with little physical damage. When the early psychical disturbances have play, but are controlled, traumatic neurasthenia, or the more marked type of delayed shock may ensue. Sometimes there is no initial hysteria; the subject displays a peculiar apathy and death is quite sure to follow. In such cases the autonomic nervous system is thoroughly disorganized, probably by inhibition from above. A woman who does not cry in the presence of a great sorrow is as liable to die as the Bengalese who can not sweat on a summer day.

In traumatic neurasthenia the protective mechanism of the body is taken by surprise. There is no preparatory adjustment of the blood distribution in the body. It is easy to understand how, given a high shock value, under such circumstances the protective adaptation may be out of all proportion to the occasion, as when an ocean liner strikes an iceberg or a telephone operator is excited by a rumor of fire.

Henderson of Yale, has shown that there is a definite relation between shock, vaso-constriction and that condition of acapnia in which there is such a diminution of carbonic acid gas in the tissues and blood that the respiration is slowed until the carbonic acid gas accumulates up to stimulating strength, and hyperphoea or dyspnoea returns. In laparotomy such a loss of carbonic acid gas may occur in this way that acapnia is produced, and may be a factor in death under anesthesia or afterwards.

It is well known that mere opening of the abdomen abolishes peristalsis of the stomach and greatly reduces that of the intestines. Motility is not restored for a considerable time after the abdomen is closed. While Henderson thinks acapnia is the cause of shock, Crookshank believes it is a part of the shock, since Crile has demonstrated that the carbonic acid gas is not given off if the displaced viscera are covered with omentum. It is interesting to note that Mr. Lane covers the intestines with a vaselined silk sheet, during abdominal operations, and it is stated that his shock effects are remarkably slight.

The simplest and clearest cases of fatal apnoea are those which occur after intense pain. When death follows intense physical suffering not complicated by hemorrhage, there are two principal stages. At first the excessive breathing diminishes the carbonic acid content of the blood. If at any time after this condition of acapnia has been induced the pain is greatly diminished and the respiratory center is allowed to relapse into a standstill, fatal apnoea vera may occur. If, on the other hand, the pain is sufficiently continuous to keep the respiratory center continually excited, then apnoea is prevented and the condition of acapnia becomes more and more acute and general until the circulation fails, and the subject sinks into surgical shock, according to Crile's definition. Both fatal apnoea and the more slowly developing failure of circulation are due primarily to the excessive breathing induced by the painful afferent nerve stimulation.

Henderson says those cases of fatal apnoea, which more than any other interest the clinician, are the failures of respiration under anesthesia. If a patient ceases to breathe in his bed it is his own fault, but if he does so

on the operating table the anesthetist has to bear the responsibility. For such cases of apnoea the acapnia hypothesis affords a simple explanation. The anesthesia diminishes the strength of the afferent inflowing irritations. Furthermore, the profound anesthesia raises the threshold of the respiratory center for carbonic acid gas, in other words, the respiratory center of man or animal in profound anesthesia automatically maintains more than the normal carbonic acid gas content in the blood. Thus when man, woman or child has suffered prolonged pain and has thereby been brought into condition of more or less acapnia, the production of anesthesia by removing the afferent pain stimuli, and also by raising the threshold and diminishing the sensitiveness of the respiratory center for carbonic acid gas, inevitably leads to acapnia. The acapnia hypothesis of Henderson requires the prevention of excessive pulmonary ventilation. The administration of morphine and full anesthesia diminish the activity of respiration under pain and thus prevent acapnia. If, however, you administer morphine or chloroform to a subject after he has suffered some time, you hasten fatal apnoea, unless you give carbonic acid gas at the same time.

In India it is customary to partially smother men who have been severely injured. It would probably be wise when a man's legs have been crushed in a railway wreck to require him to breath into a paper bag to prevent apnoea. The most important factor in the prevention of shock is to prevent pain.

The elaborate breathing exercise of the Yoga or Vendanta philosophy, practiced for more than a thousand years in India, are means through which, it is claimed, the subject can gain control over the heart rate and other functions, can render himself insensitive to pain, or even unconscious, and can induce mental exaltion and hallucination. In some of the older works on surgery it was directed that prior to a minor operation the subject should for a few minutes perform forced respiration.

Crile states, in experiments on dogs subjected to trauma the brain cells showed no change when the trauma was limited to territories disconnected from the brain by local anesthetization. Under nitrous oxid anesthesia the brain cell changes after equal trauma caused about one-third as much change as under ether.

Crile states that shock is the excessive conversion of potential into kinetic energy in response to adequate stimuli.

Shock or exhaustion may be produced by fear, worry, physical injury, injection, hemorrhage, muscular exertion, insomnia, or starvation. Brain cells from any of these causes look alike. The organs that convert latent into kinetic energy are: brain, thyroid, suprarenals, liver and muscles.

Experimentally, Crile has shown that it requires much more trauma to produce brain cell changes when the blood pressure is kept at its normal level than when it is permitted to follow its natural course downward.

Ether anesthetizes by dissolving liquid substance of brain cells. Nitrous oxide anesthetizes by interfering with the use of oxygen by the brain cells. Local anesthesia blocks nerve communication between operation and brain.

Crile says: "The brain cell changes are not due to the inhalation anesthetic alone, yet their extent is to a considerable degree determined by the anesthetic used."

Next to the operation itself, the post-operative pain is the principal factor with which we have to contend in the production of shock. The nerve block prevents post-operative stimulation of the brain cells, therefore, there can be no after pain or shock and exhaustion of the subjective mind. The lessening of shock reduces the mortality rate, and renders border-line cases under the old methods safe risks. The importance of this is evident

when one considers the number of cases operated on each year in which the outcome is uncertain or doubtful when they go on the table. Crile says, under general anesthesia the patient may not move when you cut unblocked nerves, but there will be the same degree of shock as though he was cut without any anesthetic whatever. It must be remembered that with inhalation anesthesia the greater part of the brain is awake and responds to injury just the same as though no anesthetic had been used. The entire subjective mind in unaesthetized and sensitive to the slightest trauma, with the resultant nervous shock.

With the patient under general anesthesia one is often tempted to make an incomplete nerve block, especially when the patient has been anaesthetized for a considerable time. The pain and shock vary inversely with the completeness of the nerve block.

Post operative pain is most conspicuously diminished by the use of morphine, nerve block, careful handling of tissues, sharp dissection and nitrous oxide anaesthesia.

Crile says "In the choice of anesthetic, it should be emphasized that the patient is the first consideration and not the prejudice of a surgeon for a certain method."

General anesthesia protects the brain from psychic strain alone. Local anesthesia protects the brain from the effects of local traumatic injury. Morphine affords the same protection as general anesthesia against psychic shock. Morphine reduces both traumatic and psychic shock.

In conclusion I want to state that the operative cases receiving general anesthesia that showed the least shock were those operated on under nitrous oxide anesthesia administered by Dr. Burns, and a complete nerve block of the operative field.

DISCUSSION.*

Opening discussion by Dr. W. E. Dicken, Oklahoma City.

Dr. W. E. Dicken, Oklahoma City:—We are told that we have a subjective and objective mind. It seems as though Dr. Crile and other great men have gone through this thing to such an extent that the smaller man loses the vision, but evidently there is a vision there. The question of anesthesia by any means, either general or local, is a question that is being discussed and thought of all over the country, and eventually there will be a time when this question will be settled, and settled right. I hope it will, but up to this time I don't think we have any ideal general anesthetic. You take the local anesthetic. We know there is a field for that. There is a field for local anesthesia that we can't get away from; we have to use it. There is also a field for nitrous oxide anesthesia, and we can't get away from that, and the same way with ether. Of course, chloroform has only been mentioned. I don't think it is being used in general surgery anywhere. But in local anesthesia the patient is conscious, for the subconscious mind is awake and also the subjective mind. The patient is subject to suggestions and the noises and bustle that naturally occurs during the operation. In nitrous oxide anesthesia, as Dr. Watson spoke, it seems to break down the least number of brain cells. Ether, of course, while it gives the objective mind a general oblivion to pain, at the same time your inner mind or subjective mind is awake. There is a shock even with ether. This mind is constantly awake and records

*Motion was made and seconded that the two papers above be read and discussions be made together. Motion prevailed.

these things, and it seems to me from a surgical standpoint that Dr. Crile has almost solved the mystery of general anesthesia.

I have certainly enjoyed the papers. While I have used all the different anesthetics, I will say that Dr. Burns gives an ideal anesthetic, as he has given some for me and the method seems to be almost ideal, yet there are some objectionable features. We have not entirely reached the point of perfection and I hope the time will come when the profession will have something that will do away with some of the objectionable features. I will say, as a rule, I prefer ether to anything else.

Dr. F. H. Clark, El Reno: The principal thing, Mr. Chairman, that is of value to every one of us in this paper is the prevention of shock. Is it the anesthesia itself or the form of the administration, or what is it? It is more a question of prevention of shock with the men who do abdominal work. Personally, I have been hanging to ether. The question of shock, I think, in a measure, comes from the manner of the operator very much more than from the anesthetic. Most of the severe cases I have seen there would be no shock at all. The thing is—what is the best general anesthesia? In the South, until the last year, they were using chloroform, but it is practically done away with there now and the clinics in the north have been using it far in excess of ether. Local anesthesia is so absolutely dependent upon the technique of the man and the amount he uses it in that I feel that it should be confined to the few experts. A man has to be an expert to do it. It should be administered by the few men who are gifted in it.

Dr. R. M. Howard, Oklahoma City: I believe, so far as we know, that the blocking of the nerves with the use of oxide gas and the addition of ether when needed, is the most ideal anesthesia that we have discovered so far. There are two classes of cases in particular that I think is of value. Unfortunately, we have a good many cases coming to us for operative procedure—people who are on the verge of nerve exhaustion as a result of the disease from which they have been suffering—and a great many of these cases through the surgical procedure are pushed into a class that is very undesirable. When they come to us on the verge of nervous collapse, and by our procedure we throw them into that class, it is very difficult for us to get results. Then another class of cases is the septic cases, particularly peritoneum cases or inflammatory conditions about the abdomen. Crile says that death takes place in these cases as a result of the exhaustion of the vital forces which are endeavoring to keep up the proper balance, and if we can preserve those vital forces by the use of an anesthesia that prevents post-operative trouble by nerve blocking, that prevents also post-operative trouble and to a certain extent the mental pain and suffering which the patient must go through with, we evidently do a great deal to conserve these vital forces which are essential to keep the patient alive. I believe in this case in addition to these anesthetics and the use of a morphin, post-operative is of extreme value. I think these papers are timely and I enjoyed them both very much. I think we can profit by them and can improve our results by the use of this method which I feel sure is the best known today.

Dr. F. Y. Cronk, Guthrie: I really wish I could have heard more of the paper. So many points of interest have come up that I want to say a few words. The shock in surgical work is really the most important of anything that we have to deal with. Regarding the question as to the best anesthetic, I think we should favor our patient as to the one that is indicated. I like the nitrous oxid anesthesia. I use a great deal of local anesthesia, but do not think the use of local anesthesia in cases where it will take two or three hours, is the best anesthesia in these cases. Local anes-

thetia combined with nitrous oxide is possibly one that gives a minimum amount of shock. I was in Cleveland with Dr. Allen (assisted there one year) and of course Dr. Crile was changing his methods from time to time, using nitrous oxide at that time and later on combined the local anesthesia. Regardless of the anesthesia we used, I think one of the most important things was the treatment of the patient immediately after operation. As soon as the operation is finished the majority of people think they must hurry the patient right off of the operating table. That is the place I think a great deal of shock occurs. When the operation is finished, no matter if we have two or three patients waiting for the operating table, if the patient is not in the best condition or had a long operation I feel that we should leave the patient on the operating table and keep them warm and comfortable. It is best even if they have to stay there for hours. Keep them warm and do not pick them up and toss them around getting them in bed. I think that is the place where a lot of us produce a great amount of shock. I think this paper has come to us at a time when we should consider these things very closely and am very glad to hear so much discussion on them.

Dr. Jas. T. Riley, El Reno, Okla.: I have enjoyed this paper, especially the discussion, as I give a few anesthetics myself. I did not know until I heard the paper that the anesthesia was blamed for the shock. I believe these things are more the fault of the surgeon than the anesthesia. The vomiting, I think, can be eliminated by diminishing the amount of internal shock. My experience in anesthesia has been that there is not very much shock to the operations unless the patient is subjected to hemorrhage and other unnecessary shock. My experience has been principally ether. I have operated about 1500 cases in El Reno. The signs I have used in giving anesthetics are the ear and the pulse along with the respiration. In a large measure the vomiting can be eliminated by turning the patient's head to one side and allowing the mucous to drain out of the side of the mouth. Unless this is done it has to fall back in the oesophagus during the administration of the anesthetic. I can also go by the redness of the patient's ear. I never allow the eyes or even the lid to be touched, as I believe our soiled fingers will set up a conjunctivitis that will be far worse. I cover the patient's eyes with absorbent cotton and then put a towel over them to prevent getting ether in the eye. You all know that conjunctivitis caused by ether is very painful to the patient. I believe too much blame is laid to the anesthesia that rightly belongs to the surgeon.

Dr. J. F. Kuhn, Oklahoma City: I think the defense that Dr. Cronk has given to the anesthesia is very timely, and that the form of shock is the essential thing to be remembered and not so much the form of anesthetic that is used. I believe that we ought to bear in mind the selection of the anesthetic and the action of the surgeon and all the operating force should bear in mind. The first thing that should be done is for the patient to be brought to the table in a calm state of mind. Yet, in the majority of cases, your patient selected you as the surgeon and has confidence in you. If that is the case, you must prepare his mind for this procedure, which is to him a very momentous occasion. No matter how frequently you hear: "We don't object to the operation, but are afraid of the anesthetic." In reality it is the operation that is giving them the concern and not the anesthetic.

If your patient is prepared to go on the operating table with a feeling of confidence in you, you have largely done away with shock. There is a certain bustle and commotion and discussion of the possibility of hemorrhage, etc.—and your patient is conscious of these words. The patient hears these words and his mind rests too much on the operation. Some few patients may be thoroughly acquainted with local anesthesia and overcome

that feeling of awe; feeling which will produce this shock. Local anesthesia, I do not think, will work in every case, and if it is used in every case you are bound to have some shock. On the other hand, if you select ether or any other good anesthesia you will have some patients who will also succumb to shock for the reason that commotion occurs during the operating period and at the end of the operating period. About the time you are concluding your operation and are just about finished, your patient is sufficiently well anesthetized to feel no pain, but just the same the subconscious mind is conscious of what is going on and as you are completing the operation the patient is becoming conscious of the confusion and the sound around them. My idea of the thing is to have the whole operating room as quiet as possible; to stop all form of commotion when the patient is through with the operation. Stop the anesthetic as soon as you feel that the time is ripe. Keep the patient quietly on the table until he has recovered to a certain normal state. This, to my mind, is all there is to the selection of anesthesia. You can't let one anesthesia replace everything. You must have a selection of anesthesia. One will not do for everything. And as Dr. Watson has said, you must have one portion for the blocking of nerves and another for the complete anesthesia. This perhaps is the ideal of all cases. No one anesthetic is perfect and I doubt whether we will ever attain such an ideal. I do believe it is the proper selection of the combination, and not only the anesthesia but the surgeon and all of his assistants and operating room force.

Dr. Rotter, Parsons, Kansas: I feel interested in this subject and cannot be kept down. Perhaps you have heard the expression, "I have a constipation of ideas," so I don't know what to say first. Almost every doctor that has got up to discuss the paper before me has said some of the things I am heartily in favor of. Shock is a thing that interests every man that does very much in surgery. Just what are the things that produce it? I do not believe the surgeon is to be blamed wholly for it and I believe the anesthesia, the surgeon and the patient are all three to be blamed for it. I was unlucky enough to lose a patient yesterday from shock. He was in fairly good health. I did a prostatectomy on him. He came in with the idea that he was not going to get well; was not going to live the way he was. He said he could not get well the way he was; that he would rather be dead than like he was, and was willing to take his chances on the operating table. He had a very bad bladder and we tried to do all we could. I think I dug the first shovel full of dirt for his grave by not reassuring him that he was going to come out all right. If we could study more about this psychology problem the doctors would not have so many cults to deal with. The osteopath, Christian Scientist, mental healer, etc., would not have the place that they now have if we studied a little more about psychology. I want to speak of some of the things in connection with the general anesthesia, in working with your patient. The pupillary reflex, I do not think, ought to be abolished altogether. It is about the only way of knowing just where the patient is—whether patient is deeply anesthetized or waking—and this is about the only way we have to tell as to that. The pupil is the only way to tell whether the patient is waking up or not. In the pupillary sign in your patient, if the patient is waking up, the pupil will relax; if in the paralytical state, the pupil is set. I think the assurance on the part of the surgeon that the patient will come out all right has a great deal to do with the lessening of the shock. They come to you with all confidence, you might say, to feel you out.

I am in the habit of using ether and using morphine as a preliminary, as the morphine reduces the patient to a state where you don't have to have so much ether. As to the method used by Dr. Crile, I am a very small

man to criticize Dr. Crile. I am in the habit of closing up the pores of the skin by using a solution of 95% alcohol. Then it acts as an anesthesia and also as an antiseptic. I have not had an infected case following clean cuts—I do not remember when—and another thing, I do remove the patient right off the table. I do not think they ought to be on the table after the operation is finished. As to the suggestion, it operates only in the patient who comes to you and you put them to sleep. I believe when they are put to sleep with ether or any other narcotic that both of the minds are put to sleep. You can talk subjective mind, suggestions and things of that sort to a subjective mind, but not when they are not surgically asleep. I think it is much better to remove them right off the table when the operation is completed, before they are conscious of the pain, rather than to leave them on the table until they are wide awake and much more conscious of pain and handling. Make them comfortable; put blankets around them and keep them warm just as though they were on the table. Another thing I do is to cover the abdomen with an electric pad. I think a great amount of the pain is relieved in this way.

Dr. F. R. Wheeler, Mannford, Okla.: We have gotten into a school of mental philosophic discussion about this subject mind, or this subconscious mind.

Dr. Sanger, Oklahoma City: I have enjoyed the two papers very much and I have enjoyed the discussion still more. There are one or two points I want to emphasize and that is we should encourage the patient. I have in mind now one family (three children, husband and wife). I have done a good deal of work for that family and every time I go to work with the children they will say: "Now, that Doctor is a good Doctor, and you are going to like him and going to enjoy this and the nice treatment you are going to receive." I have given every one of those children hypodermics of serum treatment and they would turn around and smile while I was injecting the medicine in the muscle. Now, other patients we have, said to the children: "That old mean doctor is going to hurt you," and they almost go into spasms before they were touched. Another thing, this reminds me of teaching a Sunday school of grown people. All have their opinions and after all is said and done they have the same opinion as they had before.

There is one thing I do not believe in—this nitrous oxide gas. I would not take it and don't believe I would give it to a patient of mine. I have seen people go under it in convulsions and turn black. It is merely suffocating them. I have heard it discussed favorably, but don't believe in it. I have seen it used in the hospitals, but I like local anesthesia. All these anesthetics we have been discussing reminds me of the regular physician compared to the different cults—the chiropractor, osteopaths and Christian Scientists. In the end the regular physician will survive the others, and the same way with the anesthetics. Many local anesthetics are being tried that I don't believe will hold out, and I have found in an operation that requires half an hour or a longer or shorter time that ether, other things considered, is the best. I have given local anesthesia and had the patient sit up and smile while I was giving it, yet if I would suggest or ask the patient, "Are you getting sick?" they nearly always say, "Yes, I am getting sick." And if you tell them that they are going to stand it well and are going to have an exalted pleasant feeling, it will do the same thing. I believe in suggestion to a great extent and, if you will say it, Christian Science.

Dr. Curt von Wedel, Oklahoma City: Mr. Chairman, since Dr. Watson has read a paper on psychology, I want to get down to a little fact. I am taking the liberty of quoting on this paper because it has been my pleasure

to see this experiment done on dogs. We took and pared a splanchnic nerve with ether and morphine and bound that nerve on an anvil without any blocking. We took another dog and took that same nerve and blocked it and the difference between the blocked nerve and the unblocked one was practically none. However, we allowed the dog to go without morphine and as soon as he had pain his blood pressure dropped and he went into shock. So that one of the important causes of the shock is the associate pain and not so much the injury to the specific nerve. In another dog the abdomen was opened and closed under a similar anesthesia without shock. Other dogs were opened and several incisions were made under a general anesthesia with morphinization. Practically no shock was apparent; however, on the third experiment we traumatized the intestines and those dogs went into profound shock. I think we used a sixth, and on the larger dogs one-fourth. Dogs take morphine very rapidly—very much more rapidly than a man. With other dogs we used a Bennett Inhaler, cut off the air and made them re-breathe their carbon dioxide. When the carbon dioxide went into the blood it showed a shock. I think a great deal of the shock associated with anesthesia, whether it be ether or whether it be nitrous oxide, is because of the carbon dioxide of the blood.

Dr. J. H. White, Muskogee: Doctor, you want shock with your operation. Make a railroad accident out of it, and it seems to me that you will get the shock. It seems to me that all this talk of anesthesia producing shock is out of the question. How many of us doing surgical operations today are troubled with shock following it unless it is a prolonged operation with a great deal of anesthesia taken or unless there is a great deal of hemorrhage? The condition of the patient before the anesthetic is given has a great deal to do with it. A preliminary hypodermic of morphine, one-eighth or one-fourth, and enough ether can be used. That and a local anesthesia seems to me all that is necessary in doing the operative work that we have to do. As to the use of morphine before operation, I use it and will not let my patient suffer if I can make them comfortable, and if it is necessary to give morphine to do it. If it is necessary to stand them on their heads, I do it.

Dr. T. C. Burns: In closing there are just a few points I want to bring out. I was mighty glad to hear that some of the men don't believe that the anesthesia is to blame for everything in the patient that goes wrong. Take, for instance, in shock, I have noticed, in giving anesthetic, that sometimes where the surgeon makes a very small incision and starts to stretch the skin to make it large enough to get both hands and begin to traumatize the intestines, you are going to notice first that your respiration gets more rapid, and that the pulse immediately jumps and gets faster. In regard to the pupillary reflex, I think the pupillary reflex is mighty good, but you can't give anesthesia all the time and be governed by the pupillary reflex. For example, if you give anesthesia to a "nigger" and gaze in his eyes and try to see the pupil, you are in trouble right there. You have to go according to the breathing. Another thing, you take and start in with the pupillary reflex and try it out several times. After a time you see the pupillary reflex gets sluggish and will stay that way for the reason that you have used it so much. You can't give an anesthetic and use one sign alone to tell where your patient is. The color of your patient, the heart action, etc., are all things that go to tell where your patient is, and lots of times when we get so we don't know just where they are I believe it is nothing more than right to let them come out to find out where they are and put them back in.

I also was very much pleased in the remarks that Dr. von Wedel made. He stood up for the anesthetist. Now, Dr. Sanger—in regard to him—to

the point he brought out—where the patient turns black. Gentlemen, that is not anesthesia; positively not anesthesia. It is simply asphyxiation, and I don't call asphyxiation anesthesia. There is no necessity of having any convulsions whatever. When you have a patient that is not relaxed—that is perfectly rigid—you can't operate that way, but they must have prompt treatment or they are going over the river.

The best appeal for anesthesia is this: What would you like to take if you were going under for an operation? Would you like one that would suffocate you, or would you rather have one where the mask is placed over your mouth and you are asleep before you could count five. I know a case where a lady had taken chloroform and they had to wake her and work with her to bring her back to life. The next time she was operated on she took ether. She said she thought she was going to die again and that she would not take ether. I started in and gave her the gas. Her pulse was 90 and there was not a bit of cyanosis. I claim that you should have no cyanosis whatever. A few years ago they used to think you had to get them as black as your hat to put them under, but that is all done away with and now you want to keep them pink.

In conclusion I want to mention three or four points of my paper, the first of which is the importance of anesthesia. I consider that anesthesia is just as important as a surgical operation for the reason that you have got to guide the patient through the operation. A patient is liable to die on the table from a surgical operation. You have to take care of that patient during that time. The surgeon has all he can do to look after the operation, and I think he ought to do only one of the two things.

Dr. Leigh F. Watson (Closing discussion): I do not believe the anesthesia is to blame for the shock except in a minor degree. The charts set forth the local and combined anesthesia followed by nerve blocking with no general anesthesia. Chloroform has exactly the same effect as ether so far as the brain effect goes. You can give it just as often as you give ether and get as much destruction of the brain cells, which, as you know, are never replaced. When a child starts out in life he has just so many, and every time he takes ether or chloroform he has just that many less left. So far as the study of shock goes, I believe the only accurate indication is the blood pressure and, secondly, the pulse. At least that is the observation made by Crile and, as you know, he has made a study of shock for twenty years. Of course we all know that Dr. Crile and others differ on certain points, but I feel that they agree on the essentials. Dr. White made a plea for larger doses of morphine after operation. This, to my mind, is essential. It saves the patient from pneumonia, keeps the lungs properly filled with air and prevents accumulation of bronchial secretion.

As far as Dr. Kuhn objecting to the use of local anesthesia not being adaptable to every case, I think any man who uses local anesthesia to any extent would not try to use it in every case. If they object to it, it is a waste of time for you to use it, but often you can start the local and employ the general, at the most painful period. Oftimes you can open the abdomen with local and give a short ether. Of course the closure is done under local.



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EDITORIAL

THE DEPARTMENT OF AGRICULTURE AND MISBRANDED DRUGS.

Perhaps no greater blow could be given manufacturers of fake products than a statement of their falsity issued by the Department of Agriculture. We have before us a circular issued by the information office of the Department, which, in clear-cut terms, brands more than fifty of the regular supporters of our weekly and daily papers as fakes pure and simple. This statement will be read with more interest and will carry more conviction to the mind of the reader than if issued from any other source. The bulk of supporters of patent medicines comes from the class of people who can less afford to waste their means than any others, and farmers and laborers especially are the victims of the delusions offered in the way of cures of troubles often more imaginary than real, so this publication will open their eyes to the manner in which they have been bilked. It does not carry with it the possibility of the statement being tinctured with prejudice as one coming from a medical source.

We have never believed that the investigation of these matters should come under the jurisdiction of a Department of Agriculture. An investigation of finances, navigation, war and navy matters would be more in place in their hands than the investigation of intricate chemical, food and drug problems is, but as we have the system foisted on us by years of foolish and unnecessary precedent, we must make the best of it until there is a sane change to a National Department of Health. In this connection no more good can possibly be done than to have the results of the Department's investigations widely published in such quarters as will do most good. We have always held that nothing could sting the isms, cults and fakirs generally more than publicity. They thrive on the ignorant and thoughtless, the hopeless and depressed, and darkness is their most efficient ally.

SURGICAL AND THERAPEUTIC NOTES AND SUGGESTIONS

EDITED BY DRs. L. S. WILLOUR, McALESTER, and F. Y. CRONK, GUTHRIE

"It is also necessary that the minds of physicians be purged of the belief that we have in potassium iodid an antisiphilitic agency. I have so many times dwelt on the fact that potassium iodid has not the slightest claim to be considered an agency of any value whatsoever to combat the activities of the pale spirochetes that I hesitate to revert to it again."

C. A. T.

—JOSEPH COLLINS.

Were a surgeon to read a paper before a surgical section earnestly pleading for the treatment of surgical inflammation by rest, his efforts would be regarded as "carrying coal to Newcastle" for all his surgical hearers know that accepted program already; and they practice it every day. Why is it necessary, then, to remind physicians that a tuberculosis inflammation involving lung tissue should likewise be treated by rest and not by exercise?

—BOYD McCORNICK.

In Alkaline Cystitis.

Wash the bladder thoroughly with sterile water and then inject three (3) Bulgarian Bacillus tablets suspended in an ounce of sterile water and have the patient retain as long as possible. This may be repeated two or three times a day.

(Remember that the H. & W. tablets have the greatest number of live organisms.)

—FRANCIS R. HAGNER.

The best disinfectant for the skin and hands:

Acetone (commercial), 40 parts; denatured alcohol, 60 parts, pyxol, 2 parts.

—ELLICE McDONALD.

Patients suffering from intestinal obstruction, whether this be due to strangulated hernia, constriction by bands or adhesions, volvulus, intussusception or kinking of intestines, Meckel's diverticulum, gall stones or carcinoma, should be operated at once and they should never, under any circumstances, receive either cathartics or food by mouth after this condition is even suspected.

—A. J. OCHSNER.

A urine normal on clinical examination does not exclude the possibility of cortical renal abscess.

—EDWARD P. RICHARDSON.

A glycosuria should not deter the performance of an emergency operation, but other cases should not be operated in which acetone, diacetic acid and ammonia can not be reduced by preliminary treatment. The percentage of sugar is no criterion, as fatal results have followed when sugar was temporarily absent.

—E. H. RILEY.

When a uterine fibroid tumor suddenly begins to grow rapidly, it is usually due to pregnancy or cystic degeneration.

—W. EASTERLY ASHTON.

Delay after the first warning of cancer is dangerous. Waiting, watching and hope with signs and symptoms of cancer is gambling with death.

L. S. W.

—JOSEPH COLT BLOODGOOD.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

This organization will hold its annual meeting in Oklahoma City on October 11, 12 and 13. The 11th will be devoted to clinics offered by the profession of Oklahoma City. Drs. John B. Murphy and Francis M. Pottenger will be the guests of honor of the meeting and will deliver orations on the first day. Headquarters will be maintained at the Lee-Huckins Hotel.

PERSONAL AND GENERAL NEWS

Dr. J. Hutchings White, Muskogee, is in Boston.

Dr. T. B. Hinson has moved from Thomas to Enid.

Dr. H. A. Lile, Aline, has begun construction of a hospital.

Dr. J. B. Leisure of Watonga is taking a vacation in Colorado.

Dr. W. E. Lamerton, Enid, has returned from the Mayo Clinics.

Dr. W. L. Moore, Broken Bow, vacationed in Arkansas in August.

Dr. C. M. Pratt of Maysville is preparing to locate in Pauls Valley.

Dr. P. L. Sanders of Carnegie has returned from the Pacific Coast.

Dr. J. W. Childs of Tulsa is doing special work in Tulane University.

Dr. T. C. Beeler of Guymon died suddenly from heart disease July 17th.

Dr. T. H. Fleisher, Edmund, has returned from the California exposition.

Dr. and Mrs. J. T. Riley, El Reno, are traveling in Canada and California.

Dr. Porter Norton, Mangum, spent his vacation in Northwestern Arkansas.

Dr. A. W. White, Oklahoma City, is doing special work with Sippy in Chicago.

Dr. George H. Wallace, Cheyenne, is doing special work in St. Louis and Chicago.

Dr. S. H. Welch, Dacoma, is in New York, taking special work in the post-graduate.

Dr. E. Brent Mitchell, Lawton, has returned home after an extended stay in Florida.

Dr. H. L. Summers, Osage, accompanied by his wife, is visiting the San Francisco exposition.

Dr. E. T. Robinson, Cleveland, accompanied by Mrs. Robinson, visited eastern points in August.

Dr. W. W. Brodie, Tulsa, took an automobile trip in August, visiting the Chicago Clinics during his absence.

Dr. and Mrs. W. L. Kendall, Enid, are home from Chicago, where the Doctor has been doing special work.

Dr. B. F. Johnson, Fairview, took an automobile trip to Virginia in August. He was accompanied by his family.

Dr. P. A. Smithe, Enid, who several months ago went to Europe and was assigned to Austrian territory, has returned.

The Alva Hospital, which has been closed for some time, has been re-opened. Miss Jane Howell is the superintendent.

Dr. and Mrs. M. T. J. Capshaw of Norman have returned from an extended visit from the Pacific Coast and eastern points.

Dr. V. Berry of Okmulgee resigned as County Superintendent of Health. Dr. W. M. Cott has been appointed to succeed him.

Dr. Walter Penquite, who was one of the delegates of the A. M. A. to San Francisco, has returned after an absence of two months.

Dr. C. N. Frazier, a popular physician of Hugo, died in that place September 3rd. His death was due to blood poisoning of a month's duration.

Dr. and Mrs. D. D. Weiser visited Petoskey, Michigan, for three months, during which time Dr. Weiser took special work in the Chicago Clinics.

Dr. Edward F. Davis, Oklahoma City, took six weeks' vacation on the Maine coast, visiting Washington, Cincinnati and Chicago, during August and September.

Dr. J. M. Byrum, Shawnee, was recently operated on for appendicitis at the Shawnee hospital. He will visit the Rochester and Chicago Clinics before returning to work.

Dr. O. F. Harper, Hinton, is recovering from an operation performed in the El Reno Sanitarium. His case was somewhat unusual, caused by a pin in the intestinal track.

Dr. T. L. Chambliss, Hugo, suffered an unusual accident recently when he and his team were badly stung by bees. Dr. Chambliss suffered severely from many stings and was badly prostrated. One of the horses died in a few minutes.

Dr. Fowler Border, Mangum, is out with a red hot communication castigating officers of Greer county, and especially the county attorney. Dr. Border charges that there is gross maladministration in the dismissal of charges against officers of the Mangum Light Company and others who were charged with conspiracy to injure Dr. Border, who, as mayor, opposed some of the plans of the Light Company.

Dr. Ress D. Long of Oklahoma City writes from "somewhere in France" that the 23rd General Hospital, British Expeditionary Force, is keeping him busy, and that Dr. George D. McLean, who is with him, is in the same condition. As usual there is a dearth of news as to what is going on, military censorship preventing comment on actual happenings.

CORRESPONDENCE AND MISCELLANEOUS

....., Oklahoma, August 30, 1915.

Dr. C. A. Thompson, Muskogee, Okla.

Dear Doctor:—Relating to my prospective damage suit, of which I wrote you a few days ago, am glad to say that the party has finally left town and has dropped the matter. I assure you that I appreciate your interest taken in my behalf, and that it was a great comfort to me. This matter is something entirely new to me, but have been on the lookout for some time. I feel the correctness of your article in the State Journal of last month on this subject.

Faternally,

....., Okla., September 20, 1915.

Dr. C. A. Thompson, Muskogee, Okla.

My Dear Doctor:—Yours of the 18th inst. duly received and the decision of the committee noted. I have but little comment to make except to say that the logic of the committee was not well taken. I have found out that I made a serious mistake when I dropped my defense policy with an old line company, and I assure you and your defense committee, that I shall lose no time in taking out another policy which will not grasp at technicalities to avoid their obligations. I assure you that I do not need the assistance financially, as I am fully able to meet the expense, but your committee can never make me believe that I was not entitled to it.

Yours truly,

NOTE.—This suit was based on an operation performed in January, 1915, and a few days after treatment connected with the case. The State Medical Association does not undertake to defend cases the cause of which originated before July 1st, 1915. No indemnifying insurance company ever undertook to defend an action, the cause of which arose prior to the date of the policy. The implication in the above statement that a "serious mistake" was made when he dropped his old line insurance, hinged on organization of medical defense of the State Association, is obviously incorrect. If the Doctor had old line insurance in January, 1915, they would now be defending his suit unless there was an express clause to the contrary. The observation that the Defense Committee is grasping at technicalities to avoid its obligations is also untrue. The Defense Committee does not feel that it has a right to spend the fund intrusted to it in causes originating before organization. In this case, the matter was tried out and a small judgment on cross suit obtained against the doctor before he ever notified the committee. That of itself bars him from the benefit of the defense, more especially if he had prior knowledge that that defense was to be raised. It is likely that the medical defense committee will undertake to defend cross suits, but whenever possible they should have the notice called for in the agreement they made to the members of the profession early in July.—Editor.

Oklahoma City, Sept. 22, 1915.

Dr. Claude A. Thompson, Secretary State Medical Association, Muskogee, Okla.

Dear Dr. Thompson:—As the time of the meeting of the Southern Medical Association at Dallas, Texas, is drawing near, I want to extend an invitation through The Journal to every reputable physician in the State of Oklahoma that is a member of our State Medical Association to go to Dallas and attend this meeting, and become a member of the Southern Medical.

This Association has grown rapidly in the past few years, being composed of the very best men of the South and West. The membership fee is only three dollars, including the Southern Medical Journal, which is one of our best periodicals.

As Councilor for the State of Oklahoma I would indeed be glad to have the profession of this State well represented at the Dallas meeting, which will take place Nov. 8th-11th, 1915.

The profession of Dallas are going to give this Association one of the greatest receptions it has ever had, and knowing the profession of Texas as I do, I know everybody will be entertained both royally and loyally, so let's all go.

Respectfully,

M. SMITH,
Councilor, State of Oklahoma.

MEDICAL ETIQUETTE—PERPLEXING PROBLEM AS TO CORRECT WAY OF SIGNING HOTEL REGISTERS.

Questions of etiquette, like problems in precedence, are seldom given serious consideration by people with a sense of humor. There are certain conventions based on common sense or instinctive politeness, which all but the boorish accept and follow, yet between these and the artificial code of sects, classes and professions, there is a vast difference.

Medical men in particular have come in for many jokes at the expense of artificial etiquette. They are sellers of expert services, but are not supposed to advertise their abilities in the classified columns at the regular rates, yet it is permissible to benefit by all the gratuitous publicity which comes in their way. Some doctors are, of course, superior to this little hypocrisy and pay for their advertising like anybody else, but they are deemed to be guilty of a breach of medical etiquette as defined by certain practitioners.

But let it be counted unto the profession for righteousness, or good taste, or what you will, that a majority of the doctors now visiting San Francisco have signed hotel registers as "Thomas Jones," not "Dr. Thomas Jones," nor "Thomas Jones, M. D."

There is no more reason for "Dr. Jones" than for "Jones, attorney, architect, engineer, editor, dentist, actor, aviator, janitor or street car conductor."

As for "Thomas Jones, M. D.," that ought to have been cured by the story of the visitor who signed himself "Bill Brown, B. B. B. B. B. B. B." The hotel clerk took a fit, but Bill Brown expained that the procession of "B's" stood for the "best blooming bugle blower in the Boston Brass Band."—San Francisco Examiner.

PAY IN INSTALLMENTS.

We are glad to know that Mr. Blessing, a member of the state industrial commission, generally accredited to organized labor, has taken a strong stand in favor of paying claims arising under the workman's compensation law in installments instead of a bulk sum.

In possibly 95% of the cases where a workman will be injured and entitled to compensation the money ought to be paid in installments, following such periods as were followed by the concern employing him in establishing their pay days. Especially is this true where the injury is a serious one and a compensation an amount of considerable size, as when the compensation reaches several hundred or a thousand dollars it is paid in a lump sum. In most cases it will be dissipated without either doing the injured man or the public much service.

There will be cases arising under this law where a bulk sum payment should undoubtedly be made, but they will be few and far between.

If the commission is to thoroughly protect the interest of the working man they will insist on installment payments, and will set their face firmly against allowing attorney fees to be paid out of the compensation where no attorney fees are necessary. The law will be a failure if the commission does not see to it that the damage suit lawyer is absolutely eliminated.

There is one other serious problem confronting the commission and that is the question of medical attention. Unless the state adopts a fee schedule about on the basis paid by the railroads and then watches the matter carefully there is a danger of this law becoming known as the "doctors' compensation" rather than the workman's compensation law. Of course the attorney fees and the doctor bill, if excessive, will ultimately fall on the workman.

The present workman's compensation act, we believe, will prove very satisfactory if the commission is thoroughly awake to the necessity of extending its protection to both the employer and the employe.—Times-Democrat.

DIRECTORY, OFFICERS OF OKLAHOMA MEDICAL ORGANIZATIONS, STATE MEDICAL ASSOCIATION.

Annual Meeting, Oklahoma City, May, 1916.

President—Dr. J. Hutchings White, Muskogee.

Vice-Presidents—Drs. Walter Penquite, Chickasha; L. T. Strother, Nowata; W. A. Cook, Tulsa.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegates to American Medical Association—1915-1916, Dr. Walter Penquite, Chickasha; 1916-1917, Dr. John Riley, Oklahoma City.

COUNCILOR DISTRICTS.

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2. Roger Mills, Beckham, Dewey, Custer, Washita and Woodward; Councilor, Dr. Ellis Lamb, Clinton.
3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum.
4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. Walton McKenzie, Enid.
5. Kingfisher, Canadian, Oklahoma and Logan; Councilor, Dr. Fred Y. Cronk, Guthrie.
6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika.
7. Osage, Pawnee, Creek, Okfuskee, Okmulgee and Tulsa; Councilor, Dr. Walter E. Wright, Tulsa.
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9. Pontotoc, Murray, Carter, Love, Marshall, Johnston and Coal; Councilor, Dr. J. T. Slover, Sulphur.
10. Washington, Nowata, Rogers, Craig, Ottawa, Mayes and Delaware; Councilor, Dr. R. L. Mitchell, Vinita; District Society, L. T. Strother, President, Nowata; J. V. Athey, Secretary, Bartlesville.
11. Wagoner, Muskogee, McIntosh, Haskell, Cherokee and Adair; Councilor, Dr. P. P. Nesbitt, Muskogee.
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Pediatrics—Dr. Carl Puckett, Pryor.

Eye, Ear, Nose and Throat—Dr. Edward F. Davis, Oklahoma City.

General Medicine—Dr. J. S. Fulton, Atoka.

Legislative Committee—Dr. Millington Smith, Oklahoma City; Dr. J. M. Byrum, Shawnee; Dr. W. T. Salmon, Oklahoma City.

For the Study and Control of Cancer—Drs. LeRoy Long, McAlester; Gayfree Ellison, Norman; D. A. Myers, Lawton.

For the Study and Control of Pellagra—Drs. J. Lewis Day, Norman; Chas. R. Hume, Anadarko; J. C. Watkins, Checotah.

For the Study of Venereal Diseases—Drs. Wm. J. Wallace, Oklahoma City; Ross Grosshart, Tulsa; J. E. Bercaw, Okmulgee.

Necrology—Drs. Chas. W. Heltzman, Muskogee; Martha Bledsoe, Chickasha; J. W. Pollard, Bartlesville.

Tuberculosis—Drs. L. J. Moorman, Oklahoma City; A. S. Risser, Blackwell; Dr. Ralph Workman, Woodward.

Conservation of Vision—Drs. L. A. Newton, Guthrie; L. Haynes Buxton, Oklahoma City; G. E. Hartshorne, Shawnee.

Committee on Health and Public Instruction—Drs. A. K. West, Oklahoma City; L. A. Hahn, Guthrie; P. R. Brown, Tulsa.

State Commissioner of Health—Dr. John W. Duke, Guthrie, Oklahoma.

STATE BOARD OF MEDICAL EXAMINERS.

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Reciprocity with Georgia, Kentucky, Mississippi, Nevada, North Carolina, Wisconsin, Kansas, Michigan, Nebraska, New Mexico, South Dakota, Tennessee, West Virginia.

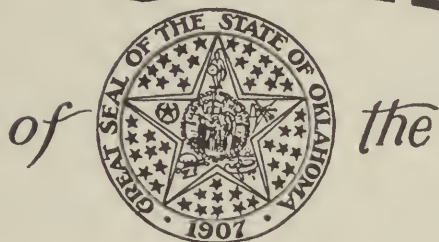
Next Meeting—Oklahoma City, October 11, 1915.

Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.

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Pawnee		
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No. 6

SERUM THERAPY, ITS USES AND ABUSES.*

Dr. L. H. Huffman, Hobart, Oklahoma.

The object of this paper is not specially to give detailed description of the uses and indications for serum therapy in surgery, but a brief review of serum therapy and a few points that may be of interest in a general way.

The importance of making a careful study of this new branch of medical science will force itself on the mind of every wide-awake physician who has thoroughly investigated the true, practical, and reliable good to come from the legitimate use of the serum in the treatment of infectious surgical conditions, as well as the remarkable discovery of the immunizing properties of the bacterins.

The science of bacteriology is one of recent discovery and the important developments that have taken place the past few years has placed the power of proper diagnosis of the infections well in our hands. The beginning of serum therapy dates back to the remarkable discovery that fresh blood serum of various animals had the power of killing bacteria, and it was further discovered that the bacteriacidal power of the blood toward certain bacteria was greatly heightened by injections with that micro-organism. Later, when it was found that the bacilli of tetanus and diphtheria secreted a specific toxin which could be separated from the bacteria by filtration and that immunization with these toxins produce a specific antitoxin, and this antitoxin when injected into a susceptible animal protected it against the pathogenic action of the organism, serum therapy came into its own.

This acted, naturally, as a great stimulation for further research on the subject of immunity. We all understand the two kinds of immunity, natural and acquired, also that it is a well-known fact that one attack of certain infectious diseases is protection or immunity against a second attack of the same disease. In some diseases this is a life-long immunity, as in smallpox or scarlet fever; in others, as cholera and diphtheria, it is much more limited.

With the artificial immunity, we have two kinds—the active and the passive. The active artificial immunity is produced by vaccination or by the injection of bacterial toxins. The passive immunity results from the introduction of a ready-made anti-toxin, as in diphtheria. The anti-toxic serum itself is produced by the active immunization of the animal from which the serum was taken. The immunity produced by either an

*Read before Surgical Section, Oklahoma State Medical Association, Bartlesville, May, 1915.

attack of the disease itself or an artificial immunity by an injection of anti-toxin is the result of a development of anti-bodies, which are antagonistic to the life of the bacteria and render them more liable to destruction by the phagocytes. Metchnikoff holds that in all cases of acquired immunity the leucocytes play a large part just as they do in a natural immunity. The passive immunity, as we have already stated, is the result of injecting and immunizing substance or anti-bodies which have been produced in great concentration in another animal by repeated injections of bacteria or toxins. Then the acquired immunity may be either anti-bacterial or anti-toxic, according as the anti-bodies produced in the blood serum of the patient act on the bacteria or their toxins.

We are compelled to consider some of the claims of serum therapy. It has made possible the care of many diseased conditions that have heretofore given us much worry, and it has increased the power of the physician wonderfully. Serums and bacterins are here to stay. We are learning to understand them better. Their field of usefulness is constantly growing and their use demands a more scientific and positive diagnosis, while the technic of their employment is becoming more exact. Serum therapy, however, is not always to be depended upon for positive relief, yet results are being obtained from the use of the serums that are usually satisfactory and often almost miraculous, and assuredly as a busy practitioner you must understand the use of bacterins and serums intelligently.

Now let us recapitulate a moment. What is a serum or anti-toxin? Anti-toxins are produced within the body of some animal, the horse being employed in most cases. Such animal is given injections of toxin of a specific bacteria in increasing quantities until the maximum resistance has been reached. As a result anti-toxic substances are produced by this animal's cells and appear in the serum. At the proper time the animal is bled and after various stages of purification and concentration, the blood serum is put up in vials or syringes for administration to human beings. This serum contains immunizing substances which directly combat the specific infection. The anti-bodies are produced in the body of the immunized animal from which the serum is taken, and by the injection of such serum we produce an artificial passive immunity.

Now we will rehearse some of the fundamentals: What is a bacterin? Bacterins (also known as vaccines) consist of suspensions of killed bacteria. No animal is required in their preparation, the organisms being grown upon suitable culture media. Bacterins are used to produce active immunity. When injected they stimulate the patient's body cells to make its own bodies, including the agglutinins, lysins and opsonins. Of these anti-bodies, the opsonins have the most value. Their exact nature is unknown, but through their action on the bacteria they render them susceptible to attack by the phagocytes. The value of the bacterin depends upon their power to stimulate the formation of opsonins.

Now the question is, when should a serum be used, and when a bacterin? You have all noticed that we have in a great many conditions both a serum and vaccine for therapeutic use. For instance, we have anti-meningitis serum and meningitis bacterin; we have anti-streptococcus serum and a streptococcus vaccine. The beginner is often puzzled which to use. It must be confessed at the present state of our knowledge on this matter that it is impossible to make a distinct line of demarcation between the indications for the use of the two.

As a rule here is your guide: When immediate action is required and expected in the fully developed stages of an infectious disease, the serum is the remedy of choice for the reason that it has the anti-bodies ready for action, and when your diagnosis is correct the effect is almost

immediate, lasting usually but a few weeks. The action of a bacterin or vaccine is more slowly, but more persistent, lasting from months to years. They are the choice in semi-acute and in chronic conditions. Then give serums (a) For immediate prophylaxis (b) In general infections, fully developed, and (c) When immediate relief is essential. Give bacterins (a) For prophylaxis, as in typhoid fever or cholera; (b) In localized infections; (c) In beginning infection, and (d) In chronic infectious diseases.

Serums, by producing passive immunity, do not tax the patient's cells and their action is rapid. Bacterins, by producing an active immunity, stimulate the patient's cells to produce the anti-bodies. Their action is slow, but more prolonged. The opsonic index is the ratio of the opsonic content of any given blood serum to that of normal serum. This index is obtained by mixing together washed human leucocytes, an emulsion of the bacterin and blood serum. After allowing time for phagocytosis to take place, the number of the bacteria injected by one hundred leucocytes is counted, and the average taken. This is the opsonic index. In normal, healthy blood serum, the phagocytic index is constant. This part of the work, however, is of little importance to the general practitioner or surgeon except to know what the opsonic index may be. The other details must be set aside for the specialist in laboratory work.

The statement that serum and vaccines are harmless and their use attended with no danger is false and misleading. There are a group of symptoms that often follow the legitimate use. I mean by legitimate use a bacteriological examination to know what serum or vaccine is indicated, a group of symptoms that do cause trouble, notwithstanding the fact that the manufacturers of serums declare there are none. The most striking ones are skin eruption, elevation of temperature, cardiac irritability, malaise, glandular swelling and joint pains. These will occur with the first injections. They are distressing and are known usually by the term "serum sickness." The second type, known as hypersusceptibility, follows the second and succeeding injections, providing these are made 10 days or more after the preceding injection. These symptoms are similar to the first, but more severe and may occur a year or more after the treatment. Deaths, while exceedingly rare, have been reported, but I am justified in saying that curative doses are best used in a confirmed bacteriological diagnosis and the remedy is clearly indicated. In a discussion on this subject in Kansas City, I heard Dr. Rosenau, of Chicago, a man of authority, say that the danger of respiratory paralysis is great in misuse of anti-toxins.

The abuses are: (1) Using curative doses without a positive diagnosis. (2) Dangers dependant upon injections, lack of disinfection of the site of operation and the sterility of the syringe. (3) The danger of overwhelming the patient with additional toxic bodies by overdosage. (4) The production of severe constitutional reactions. This can also be prevented by proper dosage.

Then the question arises, what is the best guide to dosage? First, and of prime importance, is correct diagnosis through laboratory examinations. Begin with a small dose. If no improvement and no clinical reaction, increase the dosage. If the reaction is severe with marked depression, decrease the dose. A clinical reaction is always to be avoided. Another abuse of serum therapy is to depend on them alone as a therapeutic agent and omitting supplementary treatment. A great many of the manufacturers of biologic products would have you believe that there is a positive serum for every complaint from a headache to hydrophobia, but, gentlemen, you who are looking toward the entire well-being of your

patient will use other remedial measures in the long list of infectious diseases that can now be treated with serums and vaccines. Bacterins cannot be expected to produce a cure in a patient whose vital forces are taxed, combating toxic materials absorbed from a mass of food residue in the intestines.

To bring about the results it is essential that the drugs indicated be given in each case. To be a better practitioner you need a better diagnosis, and must have it to bring relief to pain and suffering. He is the best doctor who knows the worth and worthlessness of medicines, and in the same spirit the same rule applies with the advent of serum therapy into the science. I wish to advise you to scrutinize most judiciously what you may read on serums and vaccines. Do not be so scientific as to let a patient die to prove a theory. We are now inclined to never make mistakes, and the failures are hustled off to the undertaker; but, taking a rather pessimistic view of matters, the doctor nowadays stands a few degrees worse off than the butcher or plumber. He didn't do any good, and why should he be paid anyway? Time was when about all we had to compete with was the herb doctor, and the traveling quack. Now there are so many fancy schools, new thought healers, mental therapists, mechano-therapeutists, chiropractors, christian scientists, and even the absent-minded druggist, who will treat anything from a wen to arterio-capillary-fibrosis. Parke-Davis has discovered phylacogen. Then, as usual, we always fall for anything scientific "made in Germany." Ehrlich came across with a magic number and 606 became the style, and when we were wondering what next Doc. Friedman tickled our scientific palates and furnished a good copy for the yellow journals with a turtle serum. He deserves a lot of credit, for there are others who would discover a new-fangled serum, bacterin, vaccine, opsonin or agglutinin that would set him on the road to rocks. Beware!

We really need a few of the old-fashioned doctors who cured belly-ache with castor oil and abstinence in the place of the blatant medico who clears his throat, looks wise and expects the surgeon to split the fee. We need not worry lest we feel our occupation gone. Cancer is not curable yet; corns abound; folks will continue to get sick; people die with consumption and diphtheria; fools will marry and babies will be born.

Discussion.

Dr Will, Oklahoma City: I am glad that the Doctor closed his paper as he did. I think the time has arrived when some good man prints a book of "Dont's." I am a great believer in serums, especially the anti-toxine. The whole question in using a serum is the question of diagnosis absolutely, and the question of the time to use it, as the Doctor has timely stated. Mr. Corker has brought out his tuberculin. He advises that it should be used in doses of a certain size, and the amount of temperature the patient should have or should not have when it should be taken. We went to work and used tuberculin in all cases and I can remember when reports were simply wonderful. Then the time came when tuberculin was tabooed simply because we were not using it right according to instructions. Today the men who treat tuberculosis will tell you that it is valuable because they know how to use it and when to use it. They have discovered that it should not be used when a patient is running a temperature. The question is whether any serum should be given while a patient has a high temperature; whether the system is overloaded with an anti-toxin or a toxin at that time. We find sometimes that we have been giving serum and expecting to get results, then discover a few months later that the patient has an abscess and the serum in those cases may ward this

disease off. The best results we are getting in Oklahoma City is in the auto-vaccine, where it is properly made. We are getting the best results, and I think some wonderful results, in pelvic inflammatory conditions in the female. I believe that providing we get the proper serum that we do get results. I believe that it helps in a way to ward off the pus. It will be a wonderful thing when we get the use of serum in gonorrhea worked out. Of course the anti-toxin in diphtheria is useful beyond any argument. The greatest results I have ever seen in serum is serum used in erysipelas. I can say the Doctor was right when he mentioned his "don'ts" and "do nots" because we are giving serums and will continue when we have not made a diagnosis. The question arises, how may we diagnose and the biological man comes along and tells us to use it. We know the results and the other man comes along and tells us we are using it wrong—too large and too small doses—and I can say the only safe serum or the only one besides the anti-toxin is the autogenous vaccine.

Dr. S. H. Landrum, Altus: I am glad Dr. Huffman has written the paper and read it to us, because it suggests something. When I see an incompetent man using vaccines promiscuously it reminds me of the small boy driving a high-powered automobile down a crowded thoroughfare. It should be classed with high explosives. I have had occasion a few times to use autogenous vaccine and I have not used any other. I have a patient at the present time. She has been my patient for seven years and during the last three and one-half years that patient has had multiplied abscesses. I have opened in the three and one-half years many of those abscesses in that patient. The common duct was absolutely obstructed and no bile had passed into the intestinal canal, so when these abscesses began I found that the patient became immune or partially immune. She bore this affliction much better and did her work under this condition. She worked in a laundry. I thought I saw the need of the use of a vaccine in her case, so I sent and got one and treated her for three months carefully and faithfully, but with no result. I decided possibly the loss of bile had something to do with the condition. Six weeks ago last Sunday I buttressed the gall bladder to within three inches of the duodenum, and on the Friday night before Sunday I opened the last abscess, and she has not had an abscess since. I feel that the patient is getting the autogenous vaccine that she has stood in need of all of this time.

Dr. Walker, Pawhuska: It has been held that the autogenous vaccine is the only one. The plea that it is too expensive to be used in chronic cases has been made, but to get a vaccine to carry on a course of treatment of that kind is no more expensive than your stock vaccine. There is nothing logical in trying to stimulate a person to throw out more anti-bodies when they are afflicted with a chronic disease with the injection of vaccine. If they hold on over a longer length of time than you thought it would be logical to give vaccine, as I have always found it to stimulate the anti-bodies. I think we are on the right track with our vaccine.

Dr. Ross Grosshart, Tulsa: This is a subject that is very interesting and one on which you can get your mind to running and running. I am of the opinion of most men—that the autogenous vaccine is the only vaccine that should be used. We have one or two that are anti-tcix, and further than that I am not going to try to discuss.

But there are often times that we can produce in our patients and we do produce an autogenous vaccine in our patients to my belief and we don't know when we do it. With reference to the treatment that was advocated and laid down a year ago by Dr. Murphy of the injection and use of formaldehyde and glycerin in the joints that were affected, I am of the opinion

from watching these cases that the formaldehyde and glycerin that he injected into the joint that was affected did not bring about the condition that he first thought it did and cured his case as he thought it was cured by the collecting of the bacteria locally, but he collected this bacteria within the body in the joint and the absorption of that which was an autogenous vaccine cured his patient and cures our patients. In treating gonorrhea where we experience pus from the prostatic glands and use this nitrate of silver that cured these cases that have been long years of standing, we relieved the pus percentage, got an antiseptic agency into the pus quantities and threw it back into our patient's system, and it acted as an autogenous vaccine. And the doctor has said here in regard to his case wherein he hitched up the gall-bladder to the intestines, as he was losing the bile secretion through these abscesses, and produced an autogenous vaccine within his own patient.

Dr. R. V. Smith, Tulsa: I read an article recently in an A. M. A. paper with reference to auto-serum treatment. The two doctors, whose names I can't recall, reinjected the patient's own blood serum and they reported some very happy results. It brings back the practice of the doctor of fifty years ago when treating his pneumonia patients. He raised a blister over the chest and was very careful to instruct the patient not to puncture this blister, but allow this to be re-absorbed. He was treating his patient along this same line of experiments of today, allowing the serum to be assimilated and reabsorbed.

Dr. Von Wedel, Oklahoma City: I was interested in a statement made by Dr. Parks of the Willard-Parker Hospital of New York. I do not believe it has been published as yet. In his very severe cases of scarlet fever he drew off about a pint of blood, saved the serum and injected this in other severe cases with wonderful results. He is at present storing a large amount of it with a hope of some permanent results. I don't believe the article has been published, but believe it is a right interesting thing to take up.

Dr. Huffman, Hobart: I thank you gentlemen for the discussion of the paper. The point I wish to make is the necessity of correct diagnosis to make serum treatment efficient. This can not always be had in rural sections. So far as commercial serums are concerned there may be instances where little good comes from their use, and when the diagnosis is not confirmed by laboratory methods when used in heroic doses, might become harmful. Serum therapy depends upon accurate diagnosis with the use of a corresponding serum or vaccine applicable to each given case and the correct diagnosis all the more important when using commercial serums.

CRIPPLED MOTHERS.*

Dr. S. H. Landrum, Altus, Oklahoma.

Choosing a name for a medical essay is not less difficult nor less important than the selection of a name for a story. All the "best sellers" have catchy titles, and half the time this one feature sells the story.

In the search for what to call this child of my brain I have spent as much time, sleep and worry as a prospective mother would do in hunting a name for her baby. The mother can not decide what to name her offspring until its sex is revealed. This same difficulty confronted me and I was a little wobbly in my decision what to call this baby until it was born. It was a protracted and difficult labor. I was afraid of pituitrin, and it was

*Read before Oklahoma State Medical Association, Bartlesville, May, 1915.

hardly a case for forceps. Twilight sleep presented seductive blandishments and I came perilously near yielding to that siren of hidden reefs.

My subject is "Crippled Mothers," and as I dive down into the troubled waters of motherhood I find all the treachery characteristic of the deep. Any one of you gentlemen whose experience has led you through an extensive maternity practice, and who will at his leisure smoke the pipe of reminiscence, will be surprised at the wealth of information he can gather bearing upon the subject of crippled mothers.

This question has in some form and at intervals for several years pressed itself upon me, but I was not until recently drawn toward its serious consideration. I wish now to deal with it as the law should deal with crime.

At one time the corset was blamed for the invalidism of women; next were catalogued candy, constipation, the novel, late hours, high heels and corns. All of these things have had a part in the crippling of our mothers, but they do not compass her entire undoing by any means. Most women are intelligent enough to cease doing those things which make for depreciation in personal appearance, if only there may be dispelled all those circumstances over which they have no control.

There are many underlying causes not incident to child-bearing which have to do with the physical weakness and generally sagged appearance of the mother only half through the reproductive period of her life. I refer to the hot kitchen, the cow lot, the garden and poultry yard, the wash-tub and the cotton field. Many of our mothers of the tenant class have become mere beasts of burden while carrying their babies both born and unborn. Many of them present pictures of fatigue and worry that will never be unshouldered. I am tempted to go further into the question of economics; to refer to that abominable "first Monday," when the men come to town and the wives stay home and wash, milk the cows and feed the pigs. I am in favor of abolishing first Monday.

There are other causes for the crippling of the mothers which have waited centuries for the medical man to remove. There is robust, rosy cheeked Susie, the star player on the basket-ball squad, the jolly, all-round, chum and good fellow who has never known what illness is. Why is she so soon broken in health as if two babies are to be her quota of her country's levy upon motherhood? This is a tragedy not unusual, and there is a reason for it. Perhaps the babies made their arrival through difficulties that could have been avoided if the mother had been properly instructed. There may have been symptoms which, if they had been carefully interpreted as they arose would have pointed to the remedy. Ignorance alone may be the only fault in the husband, but this in our present day is almost inexcusable. We can not blame the doctor every time, because he must be called before he can serve. Gran'ma is more often to blame, because as a rule she represents an age when liniments and poultices and blisters were specifics.

Prominent among the causes for debilitated women is Neisserian infection, and yet I am not willing to take French statistics on this point. I do not believe that every pus tube is of gonorrheal origin just because it is very frequently true that a gonorrheal history can be proven. Many a tube will drain periodically and the patient will get relief, which fact is good evidence it is not specific in character. I am also skeptical on the question of high percentage of gonorrhea in men.

Abortion, either intentional or accidental, may be the explanation for this mother's chronic illness. If it was intentional for convenience sake she deserves to be an invalid the rest of her days; if accidental she de-

serves sympathy, and a great part of her suffering may be due to the doctor's enthusiasm in bringing away all of the debris. His aseptic technic may have been faulty, or the traumatism too severe. Asepsis is of the most vital importance. It is fundamental, elemental, taken-for-granted, admittedly the prime and basic principle of all surgical interference. Its religious observance should be no Sabbath-day affair, but for every day in the week. The peeling of a banana should be done with reference to rigid asepsis. The man who can not peel a banana surgically clean does not know the first principle of asepsis.

The prolonged drain of pyelitis and the tragedy of eclampsia may be charged to the sins of omission during the waiting period in the pregnant mother. Here the physician is not necessarily culpable, for he may not see the patient before the emergency has arisen. The woman may have been relying upon the advice found in the health column of the monthly *Hearth and Home*, whose smart editor has told gaping maternity of the wonders of twilight sleep; how that the great German physician philanthropist has discovered the greatest boon to mothers. The poor women probably believe that this great man has no rival in the business of discovering boons. He is probably the same great man who discovered "Mother's Friend." Women as a rule are slow to consult the family physician concerning the troubles of pregnancy. Too many of them adopt the very latest pronouncements, or rely upon remote tradition. Most of them seek the advice of every one else than the doctor, and while this practice is not so bad in the instance of some doctors, yet as a rule the family physician issues a better grade of advice than the patient's neighbor.

The sins of omission are responsible often for that piteous and silent throng of sad-faced mothers, tramping limp and sallow from chronic ailments. The fault sometimes rests with the profession, but more often with the sorry and shiftless husband whose highest ideal in a wife is realized in her ability to bear children and fry meat. He doesn't know it, but his mind runs in the same channel with that of the great Shakespeare when the latter says, "Women were born to marry, to bear children and to weep."

The oversight of the pregnant woman by the physician involves a long and tedious engagement and few women have the courage to hold the doctor's attention to the task in hand until it is finished. Usually the doctor is not called until the woman is in labor, and, attending her in that delivery, never sees her again until her next confinement. The reason for this apparent neglect on the part of the doctor is that he can not afford to give the mother after-attention in her parturition unless he is paid for the service. More often than not he has trouble getting his pay for the actual delivery.

Retrodisplacements have their most frequent origin in these neglected cases. It is true that we find not so infrequently in the unmarried some form of displacement, and there are many of these that we never see, but the great majority are to be found in the mother whose attention during her confinements was not what it should have been. If these retroversions were looked after during convalescence from labor, properly corrected and supported, the victims would escape the gynecologist who makes a specialty of the round ligament.

Another factor in the invalidism of multiparous women is the damaged cervix. The torn cervix unfortunately has come to be regarded as a necessary affliction of the child-bearing woman. A badly lacerated cervix is necessarily an infected one. Because it cannot be conveniently repaired at the time the accident occurs and for reasons of inexpediency referred to

herein, the woman has become resigned to what she regards as the inevitable backache and "bearing down" feeling so familiar in nostrum advertisements. Not every mother suffers discomfort on account of a laceration of the cervix, because every tear is not of the same degree, and every cervix is not of the same degree of sensibility, and every woman is not hypersensitive. Some patients suffer from very slight lesions as intensely as if they were entertaining a pain from a splinter under the nail. Years ago there was a mad rush to repair every torn cervix just as there was a resect every deflected septum; but we have learned to discriminate, to repair only where repair is indicated, and to resect where resection is urgent.

The intention of the perineum is probably of more importance from an architectural point of view than the cervix, and fortunately its immediate repair is more feasible. Failure to attend to the repair of this structure at the time of its injury is of course inexcusable, and in many instances criminal. Perhaps we should try harder to prevent these accidents to the genital canal, or at least to inform ourselves of the extent of the injury at the time of its happening.

Forceps were at one time charged with the perpetration of much of the traumatism of the birth canal, and it is true that the unskilled use of this valuable instrument has caused much of the mangling of the pelvic outlet. The sufferer from the classic "female disease" has often been reminded that it was the forceps that crippled her. Ordinarily the inexperienced will hesitate to use the forceps, especially if he can get his more expert brother to come to his aid when instrumentation is indicated. Many a man will hesitate to use a big steel surgical instrument like a pair of obstetric forceps when he will readily operate a hypodermic needle on the slightest provocation. In the practice of obstetrics we have passed the era of "watchful waiting" and glided merrily into the stage of "intervention." I sometimes suspect that we have entered rather too merrily and that a period of sober study of the mechanism of normal labor would do us good. We should make greater effort to distinguish the normal from the abnormal in this important function of the generative organs and, recognizing the elasticity of these arbitrary terms, exercise our most deliberate judgment before interfering. I fear the man who is handy with his hypodermic as I do the nervous individual who is handy with his gun.

It is true that nearly all of our valuable remedies are potent, and being potent are dangerous when used without caution. The more recent agents employed as aids to child-birth carry with them this same danger incident to their potency.

For some time past there has been in use here and there for purposes of acceleration of the propulsive power of the parturient uterus the pressor principle of the cerebral hypophysis. Mere reference to such a complex biochemical substance as this is enough to catch the attention at once of us rubes who practice in the sticks, and it is no wonder that we have seized upon this means of rushing our patient through her tedious labor so that we may get back to town in time for breakfast. While we do not know any more than a rabbit just how this extract acts upon the mechanism of the generative apparatus, we use it because it does the work. It is a valuable remedy. So is chloroform, aconite, dynamite and carbolic acid.

The tendency on the part of medicine makers to exploit the more gullible of the profession through extravagant claims for their products has done harm. It has instigated some of us who do not know any more than the law allows us to know to "throw away the forceps" regardless and give the woman in slow labor hypophyseal extract, name the baby and return to the office. I am afraid some of us have been doing this. I would not decry

the merits of any drug or any means for the relief of woman in labor provided those measures are thoroughly understood and the dangers attending their use are taken into account by the man who employs them.

Twilight sleep is a wonderfully euphemistic phrase. It has caught the ear of smart editors of smart periodicals, and in too many instances the itching ear of the shallow doctor who is always on the lookout for something "new." I have met some physicians who really think this method is new. After a few years of indiscriminate bombardment with pituitrin in the hands of this class of men I fear we shall see many a battle-scarred cervix and shredded perineum. Pituitrin and scopolomin-morphin are remedies of which we may say "they are dangerous if you don't know when."

These poor mothers go through the child-bearing period drinking one bottled fraud after another, seeking vainly for relief where prevention once stood with outstretched hands to them; and at last they reach the point where the hyperope and the presbyope meet, which point old Doctor Procrastinate denominates "Change of Life."

Alexander Dumas said that what filled him with despair was that there are limits to genius, but none to stupidity. This is true of the laity as well as of the medical man. Granny will have her way in spite of earthquake, cyclone or high water. If she decrees that her daughter shall get up in nine days she will be up in that time no matter if the uterus is as big as a ham. If the doctor requests an examination at the end of two weeks, Granny will tell him that she has had more babies than he ever saw and that she always got up at the end of nine days.

The medical profession cannot without help educate the people in the management of lying in cases. The older women look upon us with distrust when we recommend anything different, while the young mother is afraid to go counter to the advice of Grandma, who has had the bringing up of so many children herself. She naturally wants the baby to sleep in the same bed with her, and it is absolutely impossible to persuade her to leave off the abominable belly-band and flannel shirt next to the skin. She will cover up its face, because that is tradition. Their own personal hygiene as directed by mother, neighbors and friends is a program for the contemplation of the gods.

There is a way out of this tangle, however, and the help comes from the most unexpected source. It is from our club women. In the city of Boston, right under the shadow of the dome of the "Mother Church Scientist," there was organized a body called the Woman's Municipal League, the purpose of which is the supervision of pregnant women. The prime object was the prenatal care of the infant. Incidentally the mother as well was a beneficiary of this enterprise.

Nurses were employed to visit those of the mothers who were unable to present themselves for observation at stated intervals, and to instruct those who were able to come to the nurse. This nurse was competent to examine urine chemically and microscopically, to take blood pressures and to lecture the mothers on personal hygiene. She was capable of recognizing the ordinary danger signals and of advising the patient when to see a doctor.

This plan has been a decided success from the beginning, and now, after five years of careful management, it has become practically self-supporting. Mothers have become enthusiastic in their co-operation. The plan can be made to work in small towns as well if the doctors will work together in their efforts to get the women's clubs to undertake the enter-

prise. The item of greatest importance is in the selection of a competent nurse. The first thing the doctors in this state should do is to require of every nurse employed in private practice that she be a regularly registered nurse, complying with every requirement of the laws of the state governing the occupation of nursing. We have been too loose in our selection of nurses. It is not fair to the regularly graduated and registered nurses for us to employ those who have not met the requirements of the law and at the same time let them collect the same fee as the graduates. We have allowed them to represent themselves as graduates when they have never had such training. To fill the position of visiting and consulting nurse one must have extraordinary training. She should have no other interests than the welfare of her patients, and should come up to the moral standards of the community in which she is employed. All the information necessary to the setting on foot of an enterprise like this can be had for the asking by addressing the Woman's Municipal League of Boston. I am quite sure we have not done our full duty in the matter of prevention of the fearful disability that confronts us on every hand among the mothers of our country. Farmers care for their hogs to prevent cholera, and the state quarantines vast areas to protect stock against foot and mouth disease. We know that those measures would never be adopted for prevention of this disease in human beings even if there were much danger, but it will never do for livestock to be endangered by disease. They represent money. Man goes to war and gets a wound or dysentery or venereal disease and the Government allows him a pension. Mother stays at home, rears the children, but fights no battles—ah, no battles? Joaquin Miller says:

The bravest battle that ever was fought!
Shall I tell you where and when?
On the map of the world you will find it not—
'Tis fought by the mothers of men.

OBSTETRICS IN COUNTRY PRACTICE.

Dr. F. R. Wheeler, Mannford, Oklahoma.

When I promised the Chairman of this Section to read a paper on Obstetrics before this body, I was at first at a loss for a title, as I had no voluminous hospital records from which to gather data; hence, the above title, which you who have had no experience in country work may think groundless.

My city observations along this line are limited, but sufficient to state that there are many phases unlike. Thus the city doctor, owing to 'phones, short distances and rapid mode of travel, sees his patient at a much earlier hour in her confinement than the country doctor does, and, too, the city doctor is frequently advised that he will be called on to attend a party at a stated time and has the opportunity to prepare his patient for said ordeal, which knowledge the country doctor seldom has.

Often his first information is the hurried midnight call to go several miles into the country, and he not unfrequently finds his patient in the second stage of labor, with little or no sanitary conditions observed. Often, too, he finds several women present who claim they know the patient's condition and advise what ought to be done at such places. However, these same "knowing" women are very glad that the doctor has arrived.

Many times we find an abnormal presentation, eclampsia or other grave conditions that we must correct, and we must do so alone, as we cannot secure help from around the corner as does the city man. So you see we

*Read at Bartlesville Meeting, Oklahoma State Medical Association, May, 1915.

are up against the real thing, to use a slang expression, and all alone. And right here, so as to secure and retain your attention while I read, I will make a bold assertion, which may seem not only egotistical but perhaps bombastic, and I make this remark with no little pride. It has never been my misfortune to see a woman die during or of confinement, and I have managed all my professional life without ever having a consultant. I suppose I have had about the usual number that country physicians have. I have kept no record, but suppose about two cases a week. We will admit that we have a hardier stock, so to speak, to work with than the city man, but with this in our favor we are compelled to take graver risks than he, and we will boldly say our results are equal to his, if not better.

Our patients have more power of resistance and more vitality, perhaps, than those of the city doctor, owing to plain methods of dress and outdoor work which keeps her much in nature's help—the sunshine. Not that the sun does not shine on her city cousin—no, indeed. Dame fashion has so curtailed her wardrobe that the sun shines on much of her body at all seasons of the year, which exposure may be the cause of repeated colds, neuralgias and other lowered conditions which have been brought about by these low-necked and short sleeve dresses enhanced by tightened corset strings that cause the higher skirts and mortality of the city doctor.

Further, to defend the title of this paper, I will relate my first case of confinement, which is perhaps typical in country work. Hardly had my shingle dried when one dark and stormy night a messenger (not many 'phones in those days) called me to go some 12 miles out in a very sparsely settled district. When we arrived at the residence the boy said: "Doctor, I will put up your team, as you will have to remain all night, and I will go home. You go on in." I found a primapara in the throes of misery. After a few questions I made an examination. I then looked wise and said she was all right, which fortunately proved true. To give you a medical picture of the situation, I will say that this young woman spent most of her spare time at her mother's, who lived on the opposite side of the large creek; that she had depended on her mother to make the necessary expected baby clothes and, too, had depended on her mother to be with her at her confinement. But she had not notified her mother of her condition, as it occurred some time before she expected, and as she would be alone till the doctor came she had no one to send but her husband. Further, it was dark, and raining like it did in Noah's time. When I told her all was right, she told her husband to go after her mother and be certain to bring all the baby clothes, as they were all over there. Between gusts of rain and wind he started, the patient all the time making the stereotyped expressions that "she could not stand it, that she was dying," and calling on the Lord this stormy night for help. Please remember that I was in an isolated country; that it was raining; no one to help me; only one lamp—a small coal oil one; husband gone; my first case; patient all time crying out she was dying. When she would get a little easier she would say: "I do wish mother were here," and so did I. The lamp ceased to burn, but I refilled it. Raining, blowing, getting colder, all alone. Patient repeatedly saying "she could not stand it; that it would be the last." I thought so, too. She assured me she could not stand another pain, saying, "Doctor, oh Doctor, do something. Doctor, were you ever this way?" I assured her that I had been and made a good recovery, which seemed to have a soothing influence on her, as she asked me to go down to the creek and see if the bridge had floated away. Between rainstorms I did, and to my chagrin and dismay I found that it had. I well knew that the girl's husband and mother could not arrive ere daylight, as they would have to go some 15 miles to another bridge. I determined to do the best I could. I ran back. Just as I entered, the patient

said she was dead. Really I thought she would die. I soon saw she was not. Another hard pain and she said, "There it is." I severed the cord, laid the baby on the other side of the bed, and waited for the completion of the third stage. It soon terminated, to my glad surprise. But the patient again commenced her former moaning, which soon increased to loud cries. I told her that she was suffering from after pains. She said: "I hope they will stop after while if they are after pains, but from the way I feel they are before pains." I gave her some medicine for them, but it seemed that I had made a mistake, as the medicine made them worse. Still raining, dark, cold, poor light, alone and nothing to do anything with. Patient commenced again in earnest to cry out. I decided to make another examination. when, to my, amazement, I felt the appendix, which had burst through. Horrors! What could I do? I had been thoroughly drilled in how to operate, but not per vagina. I feared my patient would die and commenced to arrange the best I could to try to save her life. Getting what little paraphernalia I had ready, I decided if another examination confirmed my diagnosis I would do some kind of an operation. I re-examined and to my surprise found that the appendix had ruptured or was bifurcated. Lamp then went out, so to speak. Patient getting worst. Doctor bewildered. Now all of you know by this time it was the other twin.

By the time the patient got easier I began to realize the situation. I thought of Adam when Eve appeared. How to dress twins with no clothes was a problem. Looking round I found some flour sacks. Then and there short-sleeved kimonas became stylish, and I believe are so to this day. One twin was named Lola in honor of my wife and the other named Fred. Next fall I received a load of corn for my work.

You are now ready to admit that country and city practice differs. We will tell you how we proceed, and also make some suggestions to help the young country doctor. First, a good team. And as we have to respond to night calls a good light is very essential. I have tried the Deitz, Ham and other lamps, but have found the carbide or acetyline lamp the best. I use a Columbia pattern, which I have attached to a cane pole which is long enough to have light as high or higher than top of buggy. A light placed high will shine out over and ahead of your team and enable you to drive in a trot same as daytime. A dashboard light illuminates the rear part of your harness. This light will be also good for curettement and throat and ear work in the country.

But I hear the city man saying why not use an auto? They will take you quickly and in style, too. I am sure there are many roads that cannot be traveled by an auto. Further, I presume that they are expensive. I never used an auto, but I will say that I get over most of the roads in a vehicle said to be on sale at the 10 cent stores. I refer to my little Ford. Yes, the Ford is the country doctor's car. If you have never driven a car and you are not a mechanic do not buy a used car. Buy a new one and if you want to improve it put on a prestolite, a Rayfield carburetor, extra radius rods (the latter to be attached under the axle), no-leak piston rings and, if you buy only one for each piston, be sure to place it at the bottom of the piston, and later you will want a self-starter and electric lights. Your first six months will be as hard on your car as the next six years. I have told you how to get to your patient, who we will now deal with more directly.

The country doctor cannot secure help from around the corner, so study your case. Try to make out the patient's condition, for we have to take more risks than the city doctor does, and, as I repeat, all alone. We will leave the fine, technically aseptic method which everybody writes about and few have the opportunity to follow, to others. We, however, use

a liberal amount of soap and water, and try to be as clean as possible. If allowed we place our patient on a table or cot to be confined. We do not use the Kelly pad. Rubber sheeting will answer. Suppose the patient's condition normal or typical, with no complications. We routinely, then, give chloral in the old bromidia formula to quiet her and relieve her suffering, then morphine or some derivative of opium, the latter hypodermically, and last chloroform. We have never seen any bad results on mother or child when used this way. We try to tide our patient over this dreaded occasion with as little suffering as possible. We have read the twilight-sleep method in both the medical and the lay literature and will say that such a method is not practical in the country. In one of the lay publications I note that a lady was confined happily at Freiberg by this method while asleep. I also note that she was attended by three doctors and five nurses and at a nominal cost of \$580. She ought to have had an easy time. Surely the doctors did as to finance. I note in the medical journals of late that many American doctors state that they have been using similar methods all along, many giving their method very minutely.

We are not so far behind Germany as the lay magazines would impress the public. With all due respect for Harper's, Collier's and other publications which have done much to expose such frauds as Peruna, Wine of Cardui and other frauds, we feel sure that the Sunday dailies and other lay literature by publishing such high-sounding statements about twilight-sleep has created in the public mind much unrest and a belief that we American doctors are not posted on late methods. I am willing to admit we may soon learn something from them in artillery surgery. As to twilight-sleep, I would say as Wilson said about the present outlook since the sinking of the Lusitania, "Be calm." While writing this I see in our State Medical Journal that Dr. Petty of Guthrie (a city man) has a paper on this phase, so I will stop short, saying with chloral, black cohosh, morphine, hyoscine, and chloroform, and all in small doses, we can and do give our patients great relief, and produce as near painless birth with safety as can be done from such a dangerous method as the twilight-sleep.

You may wish to know how we proceed when we have wrong presentations, eclampsia and other difficulties. Because we are alone we take many risks. We study our case and while we do not want to neglect to take every advantage of time, yet here time really works wonders. We in the country have not theaters or other attractive entertainments to allure us, so we do not hastily resort to forceps. I will here remark that the use of the forceps may be at times necessary, as in an inert uterus, a high or floating foetus, eclampsia, exhaustions, and so on, but we must use care and be sure that the condition of the patient will warrant their use. Thus in an occipito posterior position the young doctor is tempted to use them. Don't do so. Chloroform and use digital means. Introduce the hand into the birth canal and push up the foetus and at the same time turn it one-half round. Not one-quarter. Then it may be necessary to resort to the forceps. Often when tempted to use forceps we hesitate and use pituitrin, which, while not universally used at present, will soon be common in every obstetrician's satchel. We will remark that before you use this powerful agent be sure that your patient is ready for its use. The same rules that govern the use of the forceps well apply here.

If you will study your patient's condition, especially the presentation, and keep a cool head, you can make much progress. But this you must do, as you cannot secure help in the moment of need. The books are very consoling when you are in the office, but you cannot use them at the bedside. I am reminded of what a very intelligent lady recently told me when she was in labor. She had two works on toxicology and while suffering she re-

quested me to bring to her the books. I supposed she wanted to show me how to proceed. After a very hard pain she threw the books to the floor, saying: "Go. You are very nice to read but no earthly account when you get up against the real thing." And this is much my observation. I will, however, make this consoling remark—that God is kind to poor people and ignorant doctors. It may be my dull intellect does not enable me to comprehend what the books teach. Often I run up against a proposition that is not treated practically in the books. Here time and vaseline works wonders. Where does the vaseline come in? On the hands. All have the time. So you see I am not an advocate of the forceps. Yet I use them. I like them, but I like them as I like short sleeves and low neck dresses—on the other man's wife.

Discussion.*

Dr. Mitchell, of Vinita: I certainly enjoyed the reading of these two papers that we heard a few minutes ago, especially the one we just now heard. I believe each and every one appreciated the paper that was read by the doctor on country practice. I don't think I will be able to discuss the two papers. Each of us see them and view them from our own standpoint. In the first paper, in the beginning, where he read about the difficulty in naming the baby, and before he had finished his paper I thought he had named the paper well, "Crippled Mothers." An eminent physician has said he could tolerate carelessness on the part of the surgeon, but he could not tolerate it with the physician who was practicing obstetrics; showing that carefulness is the main thing when we are practicing that art of the profession. I believe it is one of the most important things in the work. If we are careful in what we do about our procedure, etc., the chances are we will avoid the bad consequences that we have to follow us in this particular line of work.

I believe it was in the last paper about the kindness of God to us ignorant doctors, was the expression and the wording that patience will accomplish wonders. I remember hearing a professor of obstetrics say that the main thing to do was to keep cool, not get excited, not lose your head, and the chances are that things will right themselves if you don't make them in a position that they should not be in by your manipulations. The doctor in the first case waited patiently and as a result of his waiting things were satisfactory. I enjoyed the papers very much and I believe when I say that, that I voice the sentiments of the entire meeting here today.

Dr. Hartford, Oklahoma City: There is one thing I think we should all consider in obstetrical work, and that point I wish to mention. I believe all tears (perineal tears) should be repaired at the time of child-birth. It is a little difficult to repair cervical tears, but if we use caution we can repair them. In regard to the use of the newer practice, such as pituitrin, we can tell whether we should use them, but I think that we should study them well. In a paper I read recently in which a report was made on 100 cases in which pituitrin had been used, at the close of the article it recited a case in which the doctor had administered pituitrin to a 13-year-old-girl and thirteen minutes following the administration she was delivered by a breech presentation and another minute by head presentation.

Dr. Owen: I enjoyed the papers very much myself. In regard to pituitrin, I think it is valuable when used properly. I have used it very extensively myself. I find in some cases it has beautiful results and other

*Papers by Drs. Landrum and Wheeler discussed together.

cases it has had no more result than water. I think a man should judge his cases well; absolutely have no obstruction in front of the child. I use forceps sometimes, but very rarely. I have had cases where pituitrin has saved me the use of forceps, and I think every man should carry it in his case. I don't know how many cases I have used it in—probably fifty or seventy-five. In regard to the twilight sleep. So many people think it is a new thing, just come out. It is lauded by our periodicals. I have seen the same thing time and again. Sometimes you get a blue baby and sometimes you don't. I find in some cases it acts very nicely and some cases get no results at all. In closing I wish to say that I think a man who would neglect a woman in that condition with a torn perineum or cervix is a criminal and ought to be prosecuted, for it is a hard matter if a woman is left in that condition to repair it.

Dr. Livermore: I want to say a few words on the after care of the mothers, and the prevention of displacements. One thing that is not generally recognized and that is the fact of getting the mothers on the side and getting them off of their back. Change their position either on the sides or abdomen. That will do lots toward preventing displacements. Another thing I want to mention and that is the repair of the cervical tears. I do not think a cervix tear should be repaired at the time of the birth. In fact, I think it should be an accident if a cervix tear is discovered at the time of birth.

Dr. Kurtz, Nowata: I was late and did not hear all of the paper, but I heartily agree with the last speaker. I cannot conceive of the idea of a tear of the cervix being repaired immediately after the birth. I can't imagine how you could minipulate that cervix and I don't see how you can bring the cervix down to a working field when it is so tender and soft. I think it would be almost impossible at that period. The repair of the perineum I can see. That is the proper thing to do when you have a fresh wound to deal with and the time to repair that is when it occurs.

Dr. S. H. Landrum. (Closing): I wish to call attention to the remark from Dr. Hartford in regard to the immediate repair of the cervix. I have not gone into a discussion of methods of technic, but that has final bearing upon the after results in all obstetrical cases. Right here common sense comes in and plays a very important part in the management of these cases. If I am ten miles in the country and have no help, how long will it take to repair a tear of the cervix, for instance. If I am in the hospital and have all the help I want, I will attempt an immediate repair; otherwise, I will wait and do what is called an internal operation. There is another point in connection with the administration of drugs by the hypodermic syringe. When you give a drug with the hypodermic syringe you have turned it loose without any string to it and you can't recall it after it has once been given. If you are going to use it the first thing you must consider is whether or not you can afford to turn it loose. With reference to the point concerning retroversions, we sometimes find it in unmarried women. They are very often liable to have a recurrence of that retroversion and she is the one that needs to be watched after the baby is born. It may be if she is watched for the succeeding two or three weeks and this condition is found to have recurred it is very easy to get control of at that time or very difficult at a later time. I am very much gratified at the valuable comments that have been made on the little effort that I made.



ABDOMINAL CAESAREAN SECTION.*

Charles D. F. O'Hern, President Physicians' and Surgeons' Hospital, Tulsa, Okla.

It is not my purpose to limit myself to practical experience on this subject, as I do not consider my experience yet large enough to speak authoritatively on the different phases of this subject. I shall speak of cases I witnessed and assisted at the Wertheim and Shaute Clinic, Vienna, and Rotunda Hospital, Dublin, and particularly the lying-in hospital in New York.

In this operation the child is removed from the uterus through an incision in the abdominal and uterine walls. The origin of the term has given rise to a great deal of discussion. It has been generally asserted that Julius Caesar was brought into the world by this means and obtained his name from the manner in which he was delivered (A Caeso Matris Utero). This explanation, however, can be hardly correct, as his mother, Julia, lived many years after her son's birth; and besides Julius was not the first of his name, since there is mention of a priest named Caesar who lived several generations before, and there is no evidence to show that Julius Caesar was delivered thus. The Lex Regia of Numa Pompilius, 715 B. C. expressly commands the removal of the child before the burial of the mother. We find a record of this operation done by the early Egyptians. The term probably is derived from the Latin, *partus Cesareus*, from *cedra* to cut. In the Roman law it was ordered that the operation should be performed upon women dying in the last few weeks of pregnancy. This *lex regia*, as it was called at first, under the emperor, became converted into the *lex Caesarea*, and the procedure itself became known as *Caesarean Section*.

During the first periods this operation was occasionally resorted to after death of the mother, in hopes of saving the child, but it is improbable that it was practiced on living women.

According to Caspar Bauhin the first *Caesarean Section* upon a living woman was performed in 1500, when Jacob Nufer, a castrator of pigs at Sigerhausen, Switzerland, operated successfully upon his own wife after she had been given up by the midwives and barbers in attendance. That this woman had five spontaneous labors later would go to show that this was not a true *Caesarean Section*; more likely simply removal of an extra uterine child from the abdominal cavity. The first authentic *Caesarean Section* was done in 1610 by Trautman of Wittenberg. During this period the uterus was simply incised and the child extracted. The uterine walls were not sutured, the contractions and retractions of the organ being relied upon to check hemorrhage. Most of the women perished from hemorrhage or infection. According to Budin not a single successful *Caesarean Section* was performed in Paris between 1787 and 1876. Such poor results were obtained by physicians that Harris pointed out that the operation was more successful when performed by the patient herself, or when the abdomen was ripped open by the horns of an infuriated bull. He collected nine such cases from literature with five recoveries, and stated that out of eleven cases of *Caesarean Section* performed in the City of New York during the same period, only one case recovered. In 1876 Porro advised amputation of the body of the uterus and stitching the cervical stump into the lower angle of the abdominal wall in order to lessen the danger from hemorrhage and infection. Sanger in 1882 revolutionized *Caesarean Section* by directing attention to the necessity for the employment of uterine sutures. The most frequent and important indication for *Caesarean Section* is afforded by pelvis, which are so contracted as to offer a serious mechanical obstacle

*Read before Oklahoma State Medical Association, Bartlesville, May, 1915.

to labor. Out of 571 cases in the New York lying-in hospital, 79 per cent of cases was due to some form of contracted pelvis, or deformity of spinal column; malacosteon one case. Nine cases of some neoplasm occluding the pelvis, and nine cases following some form of suspension of the uterus. Contraindications except in the presence of an absolute indication. Caesarean Section should never be performed when the child is dead or when the mother is infected and in very poor condition, or among surroundings which render an aseptic operation impracticable. From the records of the lying-in hospital in New York from December 24th. 1893, to September 10th, 1914, 571 deliveries have been by abdominal Caesarean Section. The larger part of these operations have been done in the past ten years. In 510 of these cases the mother recovered and was discharged from the hospital in good condition. This makes a maternal recovery of 89.3. In the 571 cases of Caesarean Section, 577 children were born; twins seven times. Of the 577 children delivered, 69 were stillborn or died before leaving the hospital; foetal mortality, 12 per cent. We often have deaths due to toxemia of pregnancy and eclampsia, which die after the operation.

I shall divide the cases into two classes: First the clean, uncomplicated cases, in which there is moderate obstruction or a contracted pelvis, and the patient has not had many vaginal examinations and membranes have not ruptured. This is the class of patients in which we generally get good results. The second class of cases give us high morbidity and mortality in mother and child—women who have been long in labor with membranes ruptured and labor going on for an unwarranted time, vaginal examinations every few minutes and attempted vaginal delivery by some means or by all means. The mother is undoubtedly infected and exhausted and the foetus is in very poor condition. Such cases are very poor Caesarian risks; or you may be called to see a case which has been under the care of a midwife and you find a poor risk, but we are bound to care for such cases as we find them. This was not my experience in Germany. The German surgeons will not operate such a case, as they appeared to be more anxious about statistics than about human life. They refuse to operate where repeated examinations had been made, or when attempted delivery had been made with forceps they preferred craniotomy. I do not think this is just, as I believe the maternal mortality is higher in these cases than Caesarean operations. The patient should have the benefit of the operation if her condition will permit the operation to be made with safety, and if the child has a chance to survive I feel we should give it that chance; furthermore, the child has a right to be born alive. If you have a septic case you can do a hysterectomy.

The general practitioner should prepare himself so he could investigate these cases, so he knows exactly what to expect and avail himself of some other help before cases are infected and maltreated and then expect a good result.

A foetus will live from five to twenty minutes after the death of its mother. The length of time of survival depends on the suddenness of the mother's death. The child lives longer if she dies of apoplexy, accident, hemorrhage or eclampsia than if the agony is prolonged as in tuberculosis or heart disease.

I shall first speak of extra peritoneal Caesarean Section: This operation is done a great deal abroad, especially in Germany and Austria, but I believe the enthusiasm is waning. A few cases have been done in England, but American operators have not accepted the operation on account of good results obtained by other operations. This operation may have been good in the older days when the danger of opening the peritoneum

was almost prohibitive and before the introduction of antisepsis in surgery. In this operation the patient is put in the Trendelenberg position. Incision is made above the pubis; the recti separated in the median line, exposing the connective tissue of the space of retzius. Push the bladder to the right side; the folds of peritoneum of the vesico uterine pouch is stripped upward from the lower uterine segment, exposing the area for five inches; make your incision through the lower uterine segment. Delivery is effected by forceps or by version and extraction, and wound closed in the usual manner. The only advantage in this operation is you do not invade the peritoneum, but you may get a severe form of connective tissue infection which is dangerous. Injury to the bladder may occur. Peritoneum is often opened and a large percentage of the children are lost in delivery.

The high operation for abdominal Caesarean Section is the ideal operation. No doubt you all have read this operation several times, but I shall repeat it again, as it is a psychological fact that we learn only by constant repetition. The operation is performed as follows: The abdomen is opened by median incision, eight to ten C. M., long from above down to the umbilicus. Put one or two wet, warm pads, using normal salt solution in the abdomen above the fundus to hold back omentum and intestines. Have your assistant make pressure with his hands against outside walls of the abdomen, rotating the uterus so that its anterior wall looks directly forward. Have him regulate his pressure so that the uterus is held well up to the abdominal opening and held there until the uterus is emptied of its contents and until your deep sutures are placed and tied. Be careful in making your incisions so as to keep the membranes intact. You can make uterine incision longer than abdominal opening. Sometimes the placenta is found beneath the wound. If so, push it aside. Separate the membrane from the uterine wall while they are yet distended, so you will not have to remove them piecemeal with difficulty and delay after the child is delivered, and contractions and retractions have begun, as this is the time you must be on your guard for uterine hemorrhage. Grasp the anterior thigh of the child (the one most readily found) and extract same. Do a breach extraction. After the shoulders are delivered turn the child so that the child's face looks toward the mother's face; then, with the middle and index fingers of the right hand astride its neck, and with the same fingers of the left hand in its mouth, make traction on the lower jaw and the head is carefully delivered without lacerating the uterus. Have your assistant ready with two clamps, which he quickly applies, cutting between the clamps, and the child is taken away to have respiration established, if possible to another room, so you can give all your attention to the mother. You are now ready to close the uterus. Place two fingers of the left hand into the uterus at the upper angle of the uterine wound; place and tie the upper deep suture, leaving the ends long. Do the same at the lower angle, then with the right hand in the uterus remove the placenta membranes and coagula. Your assistant can now discontinue abdominal pressure and hold the uterus up by the long ends of sutures already in place; close uterine wound by two layers of sutures, using number two chromic gut interrupted sutures for deep layer, about one C. M. apart. They are passed through the uterine peritoneum close to its cut edge, well into the muscle and down to, but not through, the endometrium and out in the reverse order on the opposite side. Draw the sutures tight enough to bring the edges of the uterine wall in accurate apposition, yet avoiding tension which would blanch and constrict the tissues. The uterine sutures are tied in three knots and cut short to the knot. The next layer will completely bury them, which is a continuous layer of number one plain gut. Begin at the lower angle of the wound. Sutures are inserted and tied; knot is covered by folding periton-

eum over it by subsequent stitches. Pass your needle well outside of tissue; include in your suture peritoneum and some uterine muscle; fold them over completely, burying the deep layer by using the Cushing stitch. This leaves no raw surfaces or knots exposed and reduces to a minimum the chances for adhesions to the uterine wound. The main object of this closure is to prevent adhesion and get a firm union of uterine wound, and uterus may involute normally and take its position in the pelvic cavity unrestricted by adhesions, and in the event of subsequent pregnancy the uterine scar will not rupture. Pads are now removed and abdominal wound is closed in three layers. Use dry sterile pads, holding them in position by snug adhesive straps. Elsewhere dressings and binders are loose, so uterus may have free movement. Do not use tight abdominal binders and avoid the risk of adhesions.

After placing your patient in bed, elevate the head of the bed to favor drainage and descent of the uterus. You can use morphine if necessary. Abdominal distension is relieved by saline irrigation or high rectal tubes. As a rule these cases do not suffer any more pain or discomfort than a patient after a laporotomy. On the eighth to tenth day your patient sits up, and on the twelfth to fifteenth day may go home. If blood or liquor amnii finds its way into the abdominal cavity in uninfected cases, do not make an extra effort to remove it, as it does no harm.

You will find the following advantages in the use of the high, small median incision entirely above the umbilicus. No danger of adhesions between the uterine and abdominal wounds, and the uterus is allowed to involute normally and takes its position in the pelvis without restricted mobility. The abdominal wall is very thin at this point and tissues are quite elastic; no important structures are divided; less chance for escape of intestines and omentum and not so much handling of abdominal contents. A very important point of your incision above the umbilicus is the less probability of subsequent hernia, for it is above the most dependent part of the abdomen, which is subjected to the greatest strain when patient is in the upright position. In my experience I have never seen hernia following this incision, and I have seen hernia following the incision below the umbilicus.

This operation should not be done by anyone not familiar with the technic and one trained in general abdominal surgery, and of course will get better results if trained in this special operation. This holds good in any line of surgery. The technic, manner and steps of the operation must, of course, be left to the operator at the time. There is no demand for speed at the sacrifice of good work. This operation should be done well in thirty minutes. This operation is the parade side of surgery and there is too much of the spectacular in it, and skillful precision is often lost in the waving of flags and blare of trumpets.

In conclusion I want to emphasize one point in Caesarean Section. That is a plea for more careful preliminary examination of cases, as in many cases, indications for Caesarean Section are present and positive from the beginning of labor or before. This should be appreciated, and they should be operated upon while mother and child are yet in good condition, as delays are dangerous and that delivery by high forceps or difficult version in the hands of skillful and experienced obstetricians is among the most dangerous operations known to surgery. Should an obstetrician do a Caesarean Section in a case which is not clearly indicated and the patient dies it would be unfortunate.

DISCUSSION.

Dr. Fred Clark, El Reno, Okla.: Mr. Chairman, the doctor has left very little to discuss in this paper. He has gone very thoroughly into the question and I am only going to touch on two or three points by way of emphasis and possibly to try to call your attention to the necessity for early diagnosis, which the doctor has spoken of.

It is a practice in the New York Lying-in hospital, and the doctor has reported freely in his paper, that we have been repeatedly warned by those men against attempting a Caesarean Section after the mother has been repeatedly examined or after forceps have been applied. One or two have gone so far as to mention that the surgeon refuses to operate under those circumstances, but that was two years ago, and I am glad to know it has been changed. We men are called as a consultant surgeon and practically the only cases we ever see is usually when we are called to see these cases after they have been given up by the family physician or one or more consultants.

I remember a case about four years ago in which there had been nearly eighteen hours of labor. The mother was brought into the hospital—in such a condition that operation was not advisable, and she died a few hours afterwards. That mother could just as well have been delivered but for those long-repeated efforts. Almost every man believes that it is a sort of a disgrace for him to be obliged to say “I can do nothing further myself” and turn the case over to another man. Because some barrier has been placed between him and the successful carrying out of his plan, he should feel no hesitancy in calling assistance or another physician and surgeon to his aid.

I remember a case a few years ago where I urged a Caesarean Section, but it was overruled by the advice of a consultant, and we were obliged to go on. The child was lost but the mother was saved. The mother was in good condition and the child could have been saved by the proper procedure. I felt confident at the time that the child's life could have been saved. It is the prejudice of the thing more than anything else. If my wife were in the condition of this woman—in a long, drawn-out labor—I would not hesitate to open the abdomen and deliver the child rather than let it go, only perhaps never to recover her strength and health and oftentimes the loss of the child. I think a physician should always have the necessary instruments for this condition in his obstetrical bag. We have to have all of these things in order to make up a thoroughly modern equipment. The surgeon who is not well equipped with all of the equipment that is available is not considered an up-to-date surgeon. It is seldom I have found a man that is doing much obstetrical practice who has in his obstetrical bag all of those things that he ought to have, and particularly which he ought to be equipped with if he is engaged in country practice and is a long way from those who might help him out. What are the indications for the Caesarian Section, someone will ask? One is uterine inertia and the other is the transverse position. I have spoken of this and it is many times fatal to the child. These are things we must remember.

Dr. Smith, Chairman: The doctor's paper is an interesting one on a subject that has gained in popularity very much within the last few years. Our ideas with reference to the Caesarean Section are very much broader than they were three or four years ago, and it is being looked upon as being much safer than the high forceps, especially in extremely contracted pelvis. Personally, I think Caesarean Section a much safer procedure than the high forcep procedure. There is one thing I would like to speak of.

That is in some of these cases where we are selected, or we fall on to them before labor is started, we often wish then to do a Caesarean Section before the active labor starts in, and in those conditions it occurs to me that pituitrin would be mighty good help, because I opened one uterine inertia that had considerable hemorrhage. In this case, just as I made my abdominal incision, I gave a dose of pituitrin and by the time I got to the uterus it was standing up and contractions going on. That was the first time that I ever used pituitrin, but it certainly acted nicely in that condition.

Dr. Ross Grosshart, Tulsa: It was mentioned in the paper the proper way to fix the sutures in order to protect the uterus from scar, and the scar giving trouble in future pregnancy. It has been my experience with the uterus that has been delivered by a Caesarean Section that in a second Caesarean Section you can find no scar. The Caesarean Section is as simple as any surgery that we do, and the conditions causing trauma usually have been caused prior to the time that the surgical procedure is started. There is no two times that you can do a Caesarean Section exactly in the same way. The Doctor has outlined a very nice procedure, and it sounds mighty good on paper, but you can't always follow the technic to a letter. It is one of the operations in which you can come nearer following the text than any operation I know of.

Dr. Watson, Oklahoma City: In regard to the question asked in regard to the uterine scar. I think this has been studied quite thoroughly by Waldon of the New York lying-in hospital, and they have reached the conclusion that the matter was of minor importance. You can get through this section sometimes and it will stand the strain of another labor. At other times it won't. I saw one case that had five Caesarean Sections, but the fifth one resulted in rupture and from that she died. Out of probably sixty Caesarean Sections during the time I should say the mortality was very high—probably 25 per cent.

In one case I recall, the patient had had several examinations. She had been in labor 24 hours before she was brought in, and against the better judgment of the staff she received the Caesarean Section. The woman died probably four days later, and in a couple of days after that the child died. The child had small bruises on one ear and from the child's blood and the mother's blood death probably resulted. This goes to show that this was not due to operation at all, but was inflicted by examinations.

Dr. Overton, Tulsa, Okla.: I think the only time to do a Caesarean Section is in the stage when you have a living child and when you have an absolutely irremovable obstruction. The thing, of course, to determine is that you have a living child, and that is comparatively easy to determine; the other that the obstruction is irremovable or absolute. That is a difficult matter.

In a very interesting book not long ago I read of a very prominent physician who was called to attend a lady in labor. He took her husband aside and said there were but two things to be done; the woman either had to have a Caesarean Section or the child had to be mutilated in delivery. Of course the man consented, not knowing anything else to do, so preparations were made and the physician returned two hours later for the woman. The woman went into labor and before he got back the child was delivered.

I think there are a few times when the Caesarean Section should be done. About two years ago I saw two cases of acute hydramnios. In both cases the Caesarean Section was considered. In one it was not done and in the other it was. The woman was saved, and when I look back I can

see that the woman would probably have been delivered. I don't believe the living child should ever be sacrificed if there is any chance to save the child as well as the mother.

Dr. Sanger, Oklahoma City: There is one point in the doctor's paper I think should be taken note of, and that is the time the doctor is called out in the country. As it very often occurs with him, anything to make a diagnosis, and he may encounter a case of eclampsia. There has always been a big veil of mystery around the Caesarean Section, but it is one of the most simple of abdominal operations, and the surgeon and an assistant working together can do a Caesarean Section with greater safety to the mother than to let the mother die of exhaustive labor or eclampsia. Then there is the question of infection.

Twenty-five years ago we might have said there was scarcely a man in the country who would attempt a Caesarean Section. Today the men who have come out of our colleges have had such excellent training that they are practically safe. In doing this operation in the country rather than let the mother die from toxemia or contracted pelvis, and the mother possesses an immunity, to a very great extent, it is much more safe to have this operation done. We should not look upon the operation, the Caesarean Section, as being of harm.

A number of years ago, at Holdenville, at a meeting of the Old Indian Territory Medical Association, there was a man who was a sufferer from epilepsy. We took him to McAlester and tried to do all we could for the old man, and it was mentioned that he was a man who had performed successfully a Caesarean Section with a pocket knife. Something was asked the old man about it and he said: "I had to do it or else the mother and baby would have been lost. I had everything as clean as could be and kept it clean and I did it with a common pocket knife." With our men out of the colleges today, it is perfectly safe for them to do a Caesarean Section, and better that they should do it right there where the indication is presented.

Dr. O'Hern (closing): It is indeed very gratifying to me to hear such a free discussion of my paper, and I consider my time well spent in preparing same. Caesarean Section is a valuable operative procedure when kept within its limits.

Replying to Dr. Dickson's question, will say that Pituitary extract should be administered as a prophylactic agent against excessive bleeding, and atomy of the uterus, and should be injected at the onset of the operation. You can use ergot later if indicated.

Replying to Dr. Clark's question in reference when to operate the Caesarean cases, I would say to operate every case when there is a chance to save a child with the mother's safety, too.

A DEFINITE SYSTEM FOR HISTORY TAKING AND CASE RECORD FILING

Dr. Wm. D. Berry, Muskogee, Oklahoma.

It is not the intention or is it necessary here to dwell upon the importance of history taking and case record filing. A history of every case must be had whether gone about in a systematic manner or not, and the only way to be sure one will remember the history as given is to make a record of same which should be filed in an orderly manner.

Apparently there has not been developed a standardized system for this purpose which can be used by any very great number of physicians. All

Abbreviations: The sign + signifies excessive; — less than normal; V variable; O negative; N normal.

1. Age 30 Sex F Nationality Am Weight 95 lbs.
Dates illness from Short-time after marriage
~~Single, married, widow~~ 5 years. Well, ~~in~~ developed. Nutrition ~~good,~~
~~anemic, plethoric,~~
2. FAMILY HISTORY 0
3. MENSES: First at age 10 yrs. ~~Always~~ usually regular, ~~irregular,~~
varies 30 to 34 days; continues from 5 to 7 days. Last Menst.
began 2/1 ended 2/4 = 12.
4. DYSMENORRHOEA: Pain ~~inguinal, right, left, shooting down thigh, hypo-~~
~~gastric, back, bearing down, remittent, intermittent.~~
Pain between menst. periods +
Frequent, constant, remittent, ~~intermittent,~~ increased by walking, standing,
~~lying or sitting.~~
5. CHILDREN: No. 0 Oldest 0 Youngest 0 Laobrs normal, rapid,
instruments. After labor in bed 0 days. Getting up well. ill.
6. ABORTIONS: No. 0 first at 0 Month, last at 0 Month In bed
last time 0 weeks.
7. LEUCORRHOEA: First appearance age 27 ~~Bloody, purulent, mucous,~~
thick, ~~thin,~~ white, ~~dark,~~ offensive, constant Worse before, ~~during after~~
menst
8. BLADDER SYMPTOMS: ~~Polyuria, incontinence, retention, dysuria.~~ Urin-
ates during day 4 to 5 times, during night 0 times. Frequency not in-
creased by standing or walking.
9. DIGESTION: Teeth, —; appetite 0, eating causes ~~distress, distention,~~
~~nausea, vomiting, eructations, flatulence, acidity~~ an hour or so after eating.
Regular, ~~irregular~~ habits of eating. Kinds of food all
V tea, V coffee, 0 alcohol.
10. BOWELS: ~~Regular, constipated, diarrhoea, alternating.~~ Action ~~full, scanty,~~
~~liquid, offensive, bloody, mucous, purulent.~~ Painful at time in pelvis at
~~anus, color.~~ N
11. NERVOUS SYSTEM: Sleeps — Hysterical, ~~paralysis,~~ nervousness,
~~neurasthenia~~
12. EXTRA PELVIC ORGANS Intermittent pain in
R. side and Back ache.
13. PREVIOUS ILLNESSES Fainting spells 4 nos 4th 12
14. SEEKS RELIEF FOR Dysmenorrhoea
Back ache, Pain in R. Side
Sterility, Constipation and Nervousness.
15. PREVIOUS TREATMENT Curetage 2 years ago
Local treatment, laxatives, tonics, etc.
16. URYNALSIS: Ounces in 24 hours 55; sp. gr. 1018; reaction ac.
color N albumen 0 sugar 0 urea —; total solids N;
sediment by centrifuge N. Microscopical not made

physicians must keep account records. The object here is to have case history, treatment, results, charge for service, credits and dates on same card, which if can be successfully worked out it will only be necessary to keep one index file.

To me the card system has proven very satisfactory for account files, to which I have added history and case record in the following manner: The cards are 5x8 inches, printed on both sides, plates. Numbers 1 and 2 show both sides of card, which is filled in with an actual case record taken from my files to illustrate the application of the system. The cards here shown I use in gynecological cases, but don't think it would be very difficult to work out a similiar system to be used in general practice cases, or any one of the specialty branches.

Method: Have printed on one side of the card all answers to questions of value referable to a case, crossing out negative answers; use signs and figures where possible to indicate words and sentences. On the other side have name, address, etc., space for charges and credits, physical findings, treatment and the result of treatment. By having answers to all ordinary questions before you, it is less possible to overlook a valuable point and you will get an accurate history with a minimum amount of writing and time, also making it possible for someone other than the physician, if necessary, to get this readable history to be filed with the charge account.

This card is not exactly what every one will want, even though they would use this system. I will, no doubt, take away some words and add others, give more room for writing space under one head and less for others, when I have the next lot printed. What I am after here is to suggest a method which I believe can be so perfected and standarized that it would be applicable to every physician's practice, and then your job printer, or publisher, can furnish the printed card which would be kept in stock for only a few cents per hundred; a filing cabinet of two or four drawers, as may be necessary, for a few dollars, which would last indefinitely, we would form the good habit of keeping better records with but little effort, at a minimum cost and as a result do better work with more satisfaction to ourselves and patients.

PHYSICIANS DO NOT HAVE TO MAKE COPIES OF PRESCRIPTIONS.

Office of Commission of Internal Revenue.
Washington, Oct. 14, 1915.

C. A. Thompson, Esq., 507 Barnes Building, Muskogee, Oklahoma.

Sir:—Replying to the enquiries contained in your letter of October 9th, regarding the provisions of the Harrison Narcotic Law, you are advised that a physician, registered under this law, is not required to keep copies of narcotic prescriptions, such prescriptions being kept on file by the druggist filling same, and constitute the record required by the terms of the law.

Respectfully,

L. L. SPEER,
Deputy Commissioner.

A ROSE AMONG THE THORNS.

Kansas City, Kans., Oct. 8, 1915.

Dr. Claude Thompson, Muskogee, Okla.

Dear Doctor: The advertising revenue of a journal depends largely on the editor's efforts to produce a good readable publication. I wish to compliment you on the way you are keeping yours up. Some of the State Journals with a very much larger subscription are allowing themselves to go backward and are not putting out nearly as good a publication as you are.

Very respectfully yours,

W. T. McDOUGALL, M. D.

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DR. CLAUDE A THOMPSON, EDITOR-IN-CHIEF

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THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL**THE OSTEOPATH AND THE HARRISON LAW.**

We have heretofore understood that an osteopath scorned drugs as a means of relieving his patients. So scornful was he that in making his arguments and pleas for legislative sanction to practice his adjustable (?) calling, he asked not to be examined in materia medica and therapeutics, for he would have none of them in his profession. Of all the tinctures, pills, masses and decoctions on which we fondly place our faith, he wanted only " * * * anesthetics in the practice of surgery and obstetrics" (Section 6895, Oklahoma Statutes). Somewhere there has been an awakening. Some disciple of physis, purveyor and worshipper of blue mass and castor oil has influenced these gentlemen of the adjusting knee and manipulative fist to harry the Commissioner of Internal Revenue into the following remarkable action:

Washington, D. C., July 23, 1915.—That portion of the paragraph headed "Registration, who is eligible for," of T. D. 2172, which reads: "An Osteopath, therefore, or other person heretofore administering these drugs, if not classed as a physician in the State in which he resides, would not be permitted to register under this law, is hereby revoked." Osteopaths, therefore, should be permitted to register * * *, etc., etc.

DAVID A. GATES, Acting Commissioner.

There is somewhere in this action a bad breach of good faith. Our laws permit men, theoretically at least, to administer drugs only after they have qualified to do so by years of patient study, which is closed by a stiff examination before a board of medical examiners. While this ruling of the Commissioner will not permit an osteopath to legally administer the smallest portion of any of the narcotic drugs under consideration, it does have the effect of showing him up in an unenviable light, and adds more than anything else further inconsistencies to those already piled up against that fraternity.

In passing it is not out of place to wonder what influenced the Commissioner to this piece of useless folly? So far as we in Oklahoma are concerned, it comes only as an added embarrassment to officers whose duty it is to inquire by what right men prescribe drugs. The former ruling, which permitted osteopaths registration in those states where the laws of such states permitted them to administer drugs, was one of common sense, and there would seem to be no excuse for the revocation. The Commissioner concludes: **"The Courts have many times, and in fact, if not quite uniformly construed the word physician, even strictly in criminal prosecutions, as including chiropractics, masseurs and osteopaths, recognized them as practicing medicine, and entitled to register as physicians."* Unfortunately they have not done so in Oklahoma. We all know they assume the functions and responsibilities of healers, treaters, advisors, etc., but they do so without warrant, except the osteopath and his limitations as to drug administration is clearly stated by the Statutes above noted. We agree that all should be classed as physicians and required to qualify to the same fine degree as is the regular practitioner, but they are not, and we object to their being "ruled" into even a technical equality with men who have qualified by years of endeavor.

*Commissioner's communication.

COMING! TUBERCULOSIS WEEK, DECEMBER 6th TO 12th.

The National Association for the Study and Prevention of Tuberculosis will not content itself this year with one day devoted to public activities, but have announced the above dates for a week of concerted work. The preliminary announcement calls for Medical Examination Day, Children's Health Crusade Day and, finally, Tuberculosis Sunday.

Here is good opportunity for every medical society and public spirited layman to get together and stimulate interest in the control of this disease which has for its basic strength and terror thoughtlessness. A communication to 105 East 22nd Street, New York, will be answered with such details as they are prepared to give out.

Some of our county societies have in the past especially dedicated some December meeting to the consideration of tuberculosis and it is to be hoped that this custom will be more widely observed than ever before.

WORKINGMEN'S COMPENSATION AND MALPRACTICE SUITS.

It is said that some "loose-mouthed" physician and, as a rule, a shyster lawyer, is the real basis for nearly every malpractice suit. Good lawyers sometimes accept these cases, but as a rule the person about to bring one goes from office to office before he finally finds a lawyer who wants, what most of them consider, such disreputable practice. However, we have them with us and probably always will have them. We have had lately, too, the organization of a Workmen's Compensation Law, which requires employers to carry insurance for their employes and to furnish them, when injured, necessary attention. The same law will prohibit the bringing of suits in most such cases and stop the returning of fancy verdicts by a jury for trivial injuries skillfully magnified by unscrupulous attorneys and physicians. This will seriously impair the income of some of our ambulance chasers, and experience has shown in other states that such laws have been followed by marked increase in malpractice suits against physicians, who in the public eye are, next to helpless corporations, most inviting of attack. Our principles of defense call for the utmost co-operation of our members and the Defense Committee. No man is safe from these suits. Whether

he practices a specialty, is a surgeon, or the tried and reliable family physician, he may wake up confronted with a summons to show cause why he should not be handsomely mulcted for "unskillfully, ignorantly and improperly, etc.," treating Johnny's ingrown nail or for perpetrating some other serious lapse.

Case records, clear, accurate notes, skiagraphs and similar devices will certainly help the Defense Committee and its attorneys in properly handling such matters as may be brought to them. Your suit may come from what you thought an unclouded sky, long after you have forgotten the details, so it behooves you to remember the danger lurking along your way and be prepared to combat it.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

This organization, meeting in Oklahoma City October 12-14, has not been surpassed in the point of scientific interest by any meeting ever held in Oklahoma. The reason for this is apparent in looking over the names of the National notables present, among which were Drs. John B. Murphy, Fred H. Albee, G. V. I. Brown, Francis M. Pottenger, George H. Moody, Frank J. Hall, Bransford Lewis and many others. Drs. Murphy and Albee illustrated their remarks on "Fractures Near to and Implicating Joints" and "Autogenous Bone Graft and Regeneration." Both talks were followed by close attention and were worth going a long way to hear. In spite of all the attractiveness of program the attendance was disappointing. Not three hundred physicians had registered at the close of Tuesday; however that phase was compensated for in interest of those present.

St. Anthony's, Weslev and University Hospitals furnished clinics for Monday, October 11th, which were well attended and Dr. Murphy gave practical work in diagnosis in some cases Tuesday. Dr. F. H. Clark, El Reno, was re-elected secretary. Ft. Smith the meeting place for 1916.

LEST YOU FORGET.

Your membership in the State Medical Association expires December 31st. Heretofore this statement has not carried with it any particular significance to the bulk of our members, but this time it has an entirely different meaning and this is written for the purpose of not only calling the attention of county secretaries, who are a vital part of the chain of efficiency as to the systematic management of the Association's affairs, but the individual member as well, who should, after this, go out of his way if necessary to assist his county secretary in keeping his name in good standing.

The dues for 1916 will be \$3.00 and they should be in the hands of the county secretaries by the first of the year to avoid delinquency. On February 1st, 1916, all names not remitted for in this office will be dropped. That date is fixed by the Council as the latest. No suit brought against a man for causes arising between February 1st, 1916, and the date on which he may reinstate his membership will be considered for defense. The excuse, "Did not think," "Put it off," etc., will not do a bit of good, for the defense committee proposes to rigidly adhere to the rules and will require members to do the same.

Never before has the responsibility on county secretaries been greater and the pay less. Occasionally secretaries have pocketed the dues paid them, and forgot all about remitting. If this occurs now they may cause the member a great deal of vexatious trouble and pecuniary loss. If the

secretary does not remit the dues the member is simply not in good standing and he would have to stand for its consequent possibilities.

Now, the way to do this properly, is to hand your check to your county secretary before January 1st. Mark what it is for, so there can be no misunderstanding about it hereafter. The secretary's name on the back will indicate that it has reached the proper place.

County Secretaries should remember that in handling hundreds of names the chance for error is great and, therefore, their remittances should be made in the manner suggested from this office and on the proper blanks. While we accept postal orders, foreign exchange, etc., the difficulty of tracing such remittances is greatly increased over the personal check, which returns to the secretary and is his receipt and protection against error.

Let's, for once, acquit ourselves of the charge of lack of business ability, procrastination and similar indictments brought against us by business men, who often wonder how we even manage to live in our unmethodical and slipshod way. **PAY YOUR SECRETARY NOW.**

PERSONAL AND GENERAL NEWS

Dr. K. R. Rone, Vici, has located in Elk City.

Dr. W. W. Parker, Custer, has moved to Thomas.

Dr. S. N. Stone, Edmond, visited Chicago clinics in September.

Dr. Walter Capshaw, Norman, is in New York for special work.

Dr. J. M. Workman of Woodward is in Chicago doing general work.

Dr. C. R. Day, Oklahoma City, has returned from a visit to eastern points.

Dr. E. S. Gooch, Lawton, is doing special work in Rochester and eastern points.

Dr. W. D. Tilton and **Miss Violet Demming** of Clinton, were married October 5th.

Dr. Fred Y. Cronk, Guthrie, has returned from an extended trip to Pacific Coast points.

Dr. and Mrs. C. H. McBurney, Clinton, have returned from a visit to Pacific Coast points.

Dr. LeRoy Long announces the opening of his offices in the Colcord Building, Oklahoma City.

Dr. W. D. Berry, Muskogee, attended the Boston meeting of the American College of Surgeons.

Dr. O. G. Bacon, Yale, sustained a broken ankle and other painful injuries when his team ran away.

Dr. B. F. Haines, formerly of Newcastle, Pa., has associated himself with **Dr. Jas. C. Johnston**, McAlester.

McIntosh Medical Society met in Checotah October 5. **Dr. A. B. Montgomery** delivered a paper on "Continuous Fever."

Dr. M. M. Roland, Oklahoma City, has returned from a trip to New York, Chicago and other northern and eastern points.

Dr. C. M. Tracy, Mangum, it is announced, will move to Woodward, Oklahoma, where he has established a modern hospital.

J. S. Limerick, Durant, was convicted in the County Court of Bryan County for illegally practicing medicine. It is stated that he will take an appeal.

Dr. J. W. Echols, McAlester, formerly physician to the penitentiary, announces the opening of offices. He will confine his work to eye, ear, nose and throat.

Dr. John Morris of Sallisaw, age 39, died September 30, after an illness of 13 days from pneumonia. He has lived in Sequoyah County 23 years and is mourned by a large number of friends.

The **Kay County Medical Society** met at the Blackwell hospital September 29. **Dr. John W. Duke** was the guest of the society and delivered an address. "A Symposium on the Uses of Pituitrin" was held, after which the nurses of the Blackwell hospital served lunch.

Dr. G. G. Fisher, Bokchito, died October 10, his remains being interred in McMinnville, Tenn., his old home. He is survived by a wife and two children. Dr. Fisher was health officer at Bokchito.

Drs. Walton McKenzie and T. B. Hudson, Enid, announce their partnership and opening of offices in Enid. It will be recalled that Dr. McKenzie was severely ill for a long time and his many friends are glad to know of his recovery.

The McClain County Medical Society met September 21st. Among other things they adopted a resolution that no member would do contract practicing for any lodge or society for less than the usual fee charged by the regular physicians of that place. The resolution does not apply to charitable institutions of benevolent societies.

CORRESPONDENCE AND MISCELLANEOUS

Oklahoma City, Sept. 24, 1915.

Dr. Claude Thompson, Muskogee, Okla.

Dear Doctor: I am enclosing you a copy of a resolution that has been passed by the Hospital Boards of the hospitals of this city and is being signed by those who operate or those who take cases to these hospitals. The Oklahoma City surgeons hope this will be an initiatory step and will extend to all hospitals in the state, and hope you will lend your aid in publishing this resolution in our journal.

Fraternally yours,

J. S. HARTFORD.

At a meeting of the faculty of the School of Medicine of the University of Oklahoma, held in March of this year, the following resolution was passed and approved by the State Board of Education at its meeting of July 14, 15 and 16, and since which time it has been adopted by the Hospital management and signed by the staff members of Wesley and St. Anthony's Hospitals.

DECLARATION.

I hereby promise upon my honor as a gentleman that I will not, so long as I am doing work in connection with the University Hospital, practice division of fees in any form; neither by collecting fees for others referring patients to me; nor by permitting them to collect fees for me; nor will I make joint fees with physicians or surgeons referring patients to me for operation or consultation; neither will I, in any way, directly or indirectly, compensate any one referring patients to me; nor will I utilize any man as an assistant, as a subterfuge for this purpose.

I further agree that in case of violation of the above declaration, my connection with the faculty and my privileges in the University Hospital shall be automatically severed.

J. S. HARTFORD.

W. J. WALLACE.

L. J. MOORMAN.

Publicity Committee.

San Francisco, September 16, 1915.

Dr. C. A. Thompson, Barnes Building, Muskogee, Okla.

Dear Doctor Thompson: Replying to yours of the 11th, any rule in regard to the defense of a suit brought on cross-complaint would be modified by the laws of the particular state. In California the Statute of Limitations bars an action for alleged damages on the torts (which includes these malpractice proceedings) at the end of one year. Fixed accounts are not outlawed for two years, and running accounts not for four years.

These being the facts, our Society has ruled that we will not defend a suit brought against a member on cross-complaint when he has sued to collect a bill within one year from the termination of last services, unless the member shall have presented the facts in the case to the Council of the State Society and received permission from the Council to sue on his bill against the patient. There are some classes when a suit to collect moneys due the physician would be more than justified; but in the majority of cases such a suit within one year is not justified.

Any further information which you may desire will be cheerfully furnished.

Cordially yours,

PHILIP MILLS JONES, Sec'y.

Medical Society of the State of California.

NEW BOOKS

In this department publications sent THE JOURNAL will be acknowledged as they are received. Reviews of new publications will be made only as space and time permit. Publishers are requested to bear this in mind in forwarding books, etc., for review.

ALVEOLODENTAL PYORRHEA.

ALVEOLODENTAL PYORRHEA. By Charles C. Bass, M. D., Professor of Experimental Medicine, and Foster M. Johns, M. D., Instructor in the Laboratories of Clinical Medicine at the Tulane University Medical College, New Orleans, La. Octavo volume of 167 pages, with 42 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth \$2.50 net.

The recent advances in our knowledge of the importance of remote and localized infections as producers of grave pathologic lesions and consequences makes this work on Alveolodental Pyorrhoea one of great interest to the general practitioner, who at all times must be alertly on the lookout for remote causes of grave conditions present with his patient. There is hardly a doubt longer that pyorrhoea should rank as one of the foremost producers of general systemic infections, ranking with infections of the tonsil and probably far surpassing the damage done by nasal infections.

The importance of prophylactic, hygienic, general systemic and skillfully applied local measures to the treatment of these conditions, therefore, becomes paramount, and in this volume the reader may be assured that he has a guide of the proper kind. Bass it is said, holds that 98 per cent of pyorrhoeal cases is produced by *Endamebae buccalis*, that ipecac in some form, either the fluid extract diluted or a dilution of emetin hydrochlorid, occasionally the drug internally, will prevent the disease or usually cure it after its appearance. This volume presents the subject in all phases and will be found valuable to those interested.

DIARRHEAL, INFLAMMATORY, OBSTRUCTIVE, AND PARASITIC DISEASES OF THE GASTROINTESTINAL TRACT.

DIARRHEAL, INFLAMMATORY, OBSTRUCTIVE, AND PARASITIC DISEASES OF THE GASTRO-INTESTINAL TRACT. By Samuel G. Gant, M. D., LL.D., Professor of Diseases of the Colon, Sigmoid Flexure, Rectum and Anus, at the New York Post-Graduate Medical School and Hospital. Octavo of 604 pages, 181 illustrations. Philadelphia and London: W. B. Sandeis Company, 1915. Cloth \$6.00 net; Half Morocco \$7.50 net.

In this work Professor Gant has exhaustively considered the subject of inflammatory and parasitic intestinal diseases. The volume contains 52 chapters devoted to all conditions likely to confront the practitioner, among others considering the infections arising as a result of the acute exanthemata, the infections directly bearing on the intestinal tract or having as their habitat the alimentary canal. Toxic diarrhoea, compensatory diarrhoea arising from such diseases as gout, diabetes, etc, the various types of enteritis, tubercular, syphilitic, entamebic, bacillary, helminthic and many others is generally taken up and noted in all their phases. The mechanical obstructive conditions are considered and their treatment both medical and surgical is noted. The technic advised is valuable and given in much detail.

FRACTURES AND DISLOCATIONS.

Diagnosis and Treatment, by Miller E. Preston, A. B., M. D., Instructor in Anatomy, University of Denver, visiting gynecologist to city and county hospitals, Denver, with a chapter on Rontgenology by H. G. Stover, M. D., Professor of Rontgenology, School of Medicine, University of Colorado, visiting Rontgelologist to city and county hospitals, etc., Denver. Cloth, 813 pages, 860 illustrations, price \$6.50, 1915. C. V. Mosby Co., St. Louis.

This book is a radical departure from the works on fractures from the fact that it is thoroughly complete as to originality of illustrations. However, the well-known principals of the treatment of fractures are not sacrificed. Of the features especially noted our attention is attracted by the high-class handling of the newer methods of bone surgery. The open or operative treatment of fractures is most thoroughly considered. The chapter on bone transplantation closely follows the teachings of Murphy and Albee. Albee's technique is closely and properly described and carries with it sufficient illustrations to make the text clear. This book is to be unhesitatingly pronounced a splendid contribution to surgery.

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No. 7

NERVOUS AND MENTAL DISEASES OF CHILDREN.*

By J. Lewis Day, M. D., Norman, Okla.

Infancy, or the nursing age, is the period of life during which the child is at the breast. It extends from birth to the twelfth month or a little longer. Childhood is the succeeding period extending to puberty. At birth the average brain weighs 10 3-4 ounces; at the end of infancy 31 1-2 ounces; at puberty 43 1-4 ounces. Thus we see that in the short space of less than two years the brain increases in size three times, while during childhood it gains less than one half. On account of this rapid growth the nervous system of infancy and early childhood is very unstable. Influences of various kinds which would not materially affect the adult may be very serious to the growing child. The heat regulating centers are not well developed, hence slight disturbance may cause a high temperature; also changes in the respiratory and circulatory rate are produced by slight causes, therefore it is of great importance that proper care be given to these abnormalities in order that permanent damage may not be done to the delicate nervous mechanism.

Convulsions. The infant is particularly liable to convulsions. They may be due, first, to direct irritation of the cortex, as for example, injury to head during a forceps delivery; to intracranial hemorrhage; to injury of cord during complicated labor; to cerebral tumor, abscess, hydrocephalus and other causes. Second, to reflex irritation, such as worms, undigested food in the stomach, severe injuries, such as compound fractures or burns, retention of urine, phimosis, etc. Teething has been ascribed as the cause of convulsions but, though possible, it is exceedingly rare. Third, convulsions may be of toxic origin and here may be considered not only those resulting from uremia or asphyxia, but also those which occur at the onset of various infectious diseases, being particularly frequent at the onset of pneumonia, scarlet fever, malaria, acute indigestion, and gastro-enteric intoxication. The pathology of convulsions is obscure. The paroxysms are of course induced by cortical irritation, but for some unknown reason after the recurrence of convulsions for a period of time, a habit may be established whereby very slight causes may produce a convulsion, hence the importance of early recognizing and combating this tendency. Individuals differ greatly in their susceptibility to such attacks. They may be a forerunner of epilepsy or may have no relation whatever to the latter.

*Read before Pediatric Section, Oklahoma State Medical Association, Bartlesville, May, 1915.

The treatment resolves itself into two considerations: First, the treatment of the attack; second, treatment of the patient after or between attacks to prevent a recurrence. For treatment of the convulsion, chloroform by inhalation, morphine hypodermically, or chloral hydrate by rectum, singly or in any combination, may be given. The hot mustard bath or hot pack with ice cap to head is also good treatment. The convulsion controlled, it is necessary to determine the cause and endeavor to remove it. It is nearly always advisable to unload the intestinal tract by irrigation of the colon. At times it is good practice to wash out the stomach; then administer calomel to produce free purgation. The essential thing is that convulsions should be recognized as a symptom of serious nervous disturbance and the cause removed. The patient should be carefully studied and all sources of local irritation avoided. Fresh air, nourishing diet, regular habits and freedom from excitement are the important things. Drugs have a secondary place in the treatment of these cases.

Epilepsy. Some of the later writers on this subject have advanced the idea that epilepsy is not a disease entity but a symptom which may be one manifestation of cerebral irritation. Thus, instead of stating that we have idiopathic or symptomatic epilepsy, we have the "epilepsies," symptoms due to diseases of the nervous system. At least we should make the distinction between epileptic seizures in cases where we cannot determine a definite cause (the idiopathic type), and convulsions due to some well-defined cause (the symptomatic type), as, for example, the seizures following cerebral hemorrhage or in cerebral syphilis.

Epilepsy does not always begin in childhood, but probably in the majority of cases the convulsions begin early in this period. Few of the infants who, at times, may have had convulsions, develop epilepsy, yet this is always a possibility and should be borne in mind. There are two kinds of attacks described—grand mal, in which the convulsion is the prominent symptom, and petit mal, in which consciousness is lost for a brief time but no distinct convulsion occurs. Not all epileptics are insane, but most cases, children as well as adults, undergo a change from a previously normal state to one of gradually increasing mental deterioration. Hallucinations are sometimes noted before or after a seizure. Idiocy and imbecility are frequently accompanied with epilepsy. Most epileptics are very irritable; indeed, sudden, slightly provoked fits of anger may for a long time be the only manifestation of this little understood disease. It may follow some acute infections, not necessarily of the nervous system—for example, whooping cough.

As to the matter of treatment, there is no newly discovered cure, though there are many such fraudulently advertised. Snake venom has not proven safe nor effective. Operation in practically all cases is contra-indicated. I have seen several sufferers who in addition to periodically recurring seizures have an ugly hole in their head. The end does not justify the means. However, it is necessary to remove any source of local irritation which may be discovered. Proper hygiene, diet, outdoor life, moderate mental exertion and good elimination may greatly lessen attacks. The bromides still furnish us the best results as far as medicinal treatment is concerned, but in moderation, for they are not without harmful effects. All opiates should be avoided.

Tetany is a condition characterized by tonic muscular spasms, which may be intermittent or continuous. It usually affects the muscles of the extremities, though it may extend to the muscles of the neck and trunk. It is almost always a disorder of infancy and rarely occurs as a primary disease. It is most frequently associated with rickets or follows some disturbance of nutrition, as chronic diarrhea or marasmus. It lasts from a

few days to several weeks, is rarely fatal and most cases pass away spontaneously. The treatment is to remove the exciting cause. The hot bath is the most valuable remedy for the spasms. Antipyrin is a valuable drug in this condition.

Chorea, or St. Vitus Dance, is a functional nervous disease characterized by aimless, irregular movements of any or all of the voluntary muscles, somewhat spasmodic in character and often accompanied by extreme irritability. This is a disease of later childhood and should not be associated with Huntingdon's Chorea or the chronic chorea occurring in late adult life. It is more than twice as frequent in the female as in the male and is very frequently associated with rheumatism. Hereditary influence is of considerable importance in the production of chorea. Overwork in school is also an important exciting factor, as is fright or the toxins from certain infectious diseases, as typhoid fever. Reflex irritation also may serve to produce choreiform movements. The ordinary course is from six to ten weeks, though it may become chronic and continue indefinitely. The management of the case is of equal importance with the administration of drugs. The choreic child should certainly be removed from school. Severe cases should be kept in bed and tonics in the form of iron and arsenic given internally.

Laryngismus Stridulus, or spasm of the glottis, is rather rare and belongs especially to infancy. It is a pure neurosis and is not to be confounded with spasmodic croup. It is frequently seen in children who are suffering from rachitis. The treatment is to stop the spasm which possibly but rarely results in asphyxia. Cold water sprinkled in the face may be all that is needed. Chloroform may be necessary. The general treatment of the child between attacks is of great importance.

The nervous child is often a problem for the physician as well as the parent. Many infants sleep restlessly, or are very easily awakened, or perhaps do not sleep a sufficient length of time daily. Genuine insomnia is very rare in childhood. Practically all these disorders may be traced to dietetic errors, or in many cases to incorrect habits. Outdoor life even for the young infant, proper diet and a regular routine will eliminate most of these troubles. Night terrors is more important. In this condition the child suddenly starts up from a short sleep, seems frightened and is with difficulty quieted. He may or may not recall the occurrence in the morning. He may see things of a frightful nature. There may be a relation between night terrors and epilepsy, at least some forms of this trouble closely simulate nocturnal epilepsy. In all these nervous children it is imperative that they should not hear stories of a fearful nature, never be frightened into quietness by stories that a bad man or black bear will "get him." To the delicate nervous system and rapidly developing imagination of a growing child the shock of such an idea is very great indeed, and may result in an unstable nervous system throughout life.

Many peculiar habits are noted among children, but unless they become chronic or can be associated with definite troubles, may pass away with no bad effects. Masturbation, nail-biting, sucking, etc., belong to the bad habits of children. Masturbation, though a filthy habit, has been very much overrated as a cause of mental disease. It is much more often the result of existing mental disorder. Disorders of speech, such as stuttering, stammering or forms of aphasia are seen in children and are most frequently due to organic brain trouble. If purely functional much can be done by careful training.

Headache may be noted as soon as a child is able to give reliable subjective symptoms. The cause may be legion as in adults, but some organic

disease should always be suspected as a cause for severe and persistent headaches. It is well to remember that at times epilepsy manifests itself by unexplained headaches. Genuine headache is so rare in childhood that the physician should never consider it lightly but make every possible effort to find the cause.

The acute infectious diseases of infancy, such as epidemic spinal meningitis, tubercular meningitis and anterior polio myelitis, need only be mentioned. Cerebral tumor, abscess and malformations of brain and cord are comparatively rare. The mentally deficient, idiots and imbeciles, form an interesting class and require special study. In most of these there is noted some physical stigmata of degeneration.

Cretinism is a condition resulting in arrested mental and physical development due to the absence of the secretion of the thyroid gland. The symptoms are usually first noted at about the age of two or three years. We have a large head, a dwarfed body, a typical facial expression, thick lips, large tongue, generally protruding. The treatment is thyroid extract, but should be begun early. In many cases remarkable results have followed the use of this remedy.

Hysteria is not common in children, but nevertheless does occur, especially in later childhood. The diagnosis is often overlooked because it is not generally suspected. The symptoms are very similar to those found in adults.

Insanity is very rare in childhood. It is a remarkable fact that, as regards mental diseases, the influence of heredity does not make itself felt in a decided way until after puberty or adult life are reached. But frequently children show abnormalities which to the observing can be discerned as forerunners of a disturbed mental state. Children who later show insanity, very frequently, though bright, have shown peculiarities. They may be abnormally self-conscious, or may have aversion to association with others of their age. They may be abnormally religious or manifest excessive shyness, self distrust or unreasonable fear. They may even show paranoiac tendencies. Suicide is very rare among children and even if accomplished it is rarely the result of ideas of self-accusation. Children rarely have hallucinations. Cases are on record, however, of well-defined dementia praecox psychoses with very plain hallucinations and delusions in children as young as eight years of age. I have seen one case of manic depressive insanity in a girl of fourteen. It is not an infrequent thing for epileptics to have hallucinations. They may be irritable or euphoric, developing typical epileptic insanity even in childhood. Of course the dementia of the epileptic is well known.

In conclusion let me urge upon you as physicians to make a more careful study of the nervous diseases of childhood. Drugs have a very subordinate place in the treatment of the conditions I have outlined. Correct habits, systematic training and improved hygienic surroundings have a very important place in the conduct of nervous disorders and these abnormalities must early be recognized and proper treatment early instituted, for in this plastic stage of their development children are very responsive to training. Prevention in this field, as in other fields of medical endeavor, is of vastly greater importance than cure.



THE EXAMINATION OF SCHOOL CHILDREN BY TEACHERS*

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A bill was introduced into the Oklahoma Legislature, and later passed and became a law, requiring school teachers throughout the State to examine school children for physical defects, and when suspected or found to report them to the parents and advise the consultation of a physician, dentist, or an eye, ear, nose and throat specialist. A similiar law to this has been passed and is now in operation in several states of the Union, especially Vermont, Connecticut and Massachusetts. Our law is almost exactly like the Vermont law, which is the best ever passed by any State Legislature.

At first thought we are prone to believe that the law entails added duties and hardships to the already overworked and poorly-paid teachers, but this is exactly what it does not do. Instead, it will relieve the teachers of much worry and many, many sleepless nights, for it is the apparently dull and stupid boy or girl who fail to pass their grades, or even to keep up in their present classes, and who cause their teachers the most work and worry. As soon as this law is put into effect and is conscientiously lived up to by every teacher, our dull and stupid boys and girls will become in many cases the leaders of their classes, for it is my firm belief that there is not much difference in the brain or mental powers of children, but there is a difference in application to work, play and study. The one is normal physically, therefore has no reason not to apply himself or herself to the task undertaken. The other is weighed down by some physical defect over which he has no control. It may be malocclusion or decayed teeth. The former will cause poor mastication of food, indigestion and intestinal fermentation, and in consequence the boy or girl will have a frail constitution, way below par. The latter, or decayed teeth, is far-reaching in its evil effects. In the first place, decayed teeth are caused by infection. The result often is an abscess, whose pus either overflows in the oral cavity or mouth to be swallowed and cause deranged stomach and bowels, or is absorbed by the lymphatics and carried throughout the body to carry on its destructive process in various ways. It may cause an incurable heart trouble; it may cause a very serious kidney disease; it may cause an inflammation of the eye with total loss of sight; it may cause either muscular or articular rheumatism; it may cause a gall bladder trouble, or an appendicitis, but often it is gradually absorbed, so that the boy or girl does not really know they have anything the matter with them. They just feel puny and tired out most of the time. It is an effort for them to do anything. Some are pale and anemic and look poorly fed. These are the first to contract any contagious disease because they have no resisting powers.

How many here realize that about 97 percent of the school children of this country have diseased or faulty mouths? In the Oklahoma City schools Dr. H. H. Cloudman, the very efficient inspector of our city schools, tells me that his records show about 66 percent of decayed teeth and many others of mal-occlusion or irregularities of the teeth. A great many people have the idea that the baby tooth doesn't amount to much and should be let alone, even though it does decay away. The baby teeth are as important to the child as are your's or mine to us and should receive the same careful attention as to cleanliness, and the same treatment if decayed. If the gateway to the system, the mouth, is kept scrupulously clean and healthy, we will have a healthier, more intelligent, far more self respecting and all-around better class of citizens for the next generation.

Again the dull child may be weighed down by defective eyes or defective vision, and unless you yourself have actually carried the load you

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cannot realize just how the child is handicapped. Do you realize that only ten or twelve children out of every hundred have normal eyes, and therefore 88 to 90 suffer from some form of eye defect? Again, did it ever occur to you that 50 percent of people of whatever age having defective eyes, suffer on and off with headache, and that about 89 to 90 per cent of all headaches are due to some form of eye strain or defect, and not due to biliousness or to fatigue, hunger and many other things thought to be the cause? It is not unusual for a child during or after attacks of some acute disease, e. g., coryza, influenza, pneumonia, scarlet fever, typhoid fever, etc., to become the victim of headaches which persists and is aggravated into acute paroxysms by the use of the eyes.

Examination reveals the fact that they are subjects of some congenital anomaly of refraction which has for the first time manifested itself in the symptoms of eye strain, under the lowered physical tone produced by the disease, and they are never again able to avoid the use of correcting glasses. The facial twitchings of school children with brow pain, irritability of temper, uncontrollable restlessness, disturbed sleep, precocious appetite and poor progress at school, all of which make them the despair of their mothers and teachers, have many times been relieved by a pair of glasses. The known existence of these troubles in so many of our school children's eyes have led the school authorities, acting upon the advice of physicians, to advise and in some sections of the country to require that no child shall be admitted to the school until the eyes have been examined by an oculist.

The dull boy or girl, too, may be affected with enlarged or infected tonsils and adenoids. Today it is known that infected tonsils and adenoids contain some of the deadliest germs which pass through the lymphatic system into the general circulation, causing first enlarged lymphatic glands of the neck, so when the teacher sees a child with lumps under his jaw or along his neck she may know he has an infection either in his teeth, nose or throat, and should be advised to consult a dentist or physician. Second, after these germs get into the circulation of blood they may cause a disease of the heart, kidneys, appendix, gall bladder or bones. Yes, they may cause rheumatism, for today we know that rheumatism is caused by a germ, and we can take it out of a diseased tonsil and inject it into the dog and cause either muscular or articular rheumatism. But here again, as in infections of the teeth, we may not have the specific germ to cause either one of the above diseases, but we may have a continual absorption of less virulent germs which keep a child feeling tired, listless and its body way below the normal. He is not robust and active as he should be. He is usually pale and anemic. If he studies at all it is at an increased physical effort. No wonder that he doesn't keep up with his classes. See that his load is lightened and he will surprise you, for he wants to, no doubt.

Adenoids are situated not in the nose, as so many think, but back of the nose in the upper back part of the throat. They are also caused by bacteria invasion. They enlarge and fill the upper part of the throat, so that there is no room left for air to pass from the nose to the lungs, the normal way, but instead the child has to breath through its mouth. This is the unnatural and unhealthy way, for by this route the air cannot be warmed, moistened nor filtered of foreign matter as it is when taken through the nose. It therefore is not taken up by the blood of the lungs as well, so that in consequence the blood of adenoid children does not take in a sufficient amount of oxygen, nor does it throw off the normal amount of carbon dioxide. The blood is therefore deficient in red blood corpuscles and hemoglobin, consequently the child is pale and anemic.

Adenoids are the cause of inflammation of the eustachian tube, middle ear and mastoid process. In fact, about eighty percent of ear infections are caused by adenoids, and again fully 66 percent of all deafness is also caused by adenoids. Over 65 percent of those suffering from adenoids have some form of ear trouble, sooner or later. In all cases of hypertrophied tonsils, adenoids are always present. In all mouth breathers of children adenoids are the cause. In most cases of deafness or running ears of children, adenoids are the cause and should be removed. Adenoids cause defective speech, a fetid breath and also a partial loss of the taste and smell. An adenoid child is listless and has difficulty in applying himself to his play, studies or other tasks, of which he soon tires. He has fits of abstraction. I was taught, and I guess our school physiologies of today teach that adenoids will atrophy and disappear at puberty. Many physicians think this is really so and advise parents that their children will outgrow them. There is no more erroneous or damaging theory than this. The truth is that they may atrophy at any time, or may not atrophy at all, and that small atrophied adenoids once infected are always infected and are a constant menace to the ears by keeping up an inflammation which extends to the ear via the eustachian tubes, causing what is known as catarrhal deafness.

We hear much talk about the conservation of our natural resources; of our forest reserves; of our oil and gas; of our coal; of our cattle and hogs. Why not more of the conservation of the health, lives and minds of our boys and girls who will be the men and women, the mothers and fathers of tomorrow? Yes, these same boys and girls are soon to take our places. They will be the teachers, farmers, ministers and doctors of tomorrow. Do we realize then the great responsibility which we, as physicians, owe them? Let me bring a few more facts and figures home to you. There are 20,000,000 public school children in the United States. At least 5,000,000 of these children suffer from eye diseases or defects which seriously impair their school progress. About 12,000,000 suffer from ear, nose and throat diseases or defects, which prevent proper school advancement.

Children who have defective teeth, eyes, ears, noses and throats cannot, unless relieved, receive any profit by public school education. To such children school work is a pain and a burden. They are always behind their classes, sometimes remaining in one room year after year, and when relieved and rendered fit for study they are regarded as mentally deficient and morally vicious, become personally disheartened and truant, drift into bad society and association, commit small and then greater crimes, and eventually may enter the criminal classes and then become an expense and care to the commonwealth as police-court defendants, and as dwellers in asylums, institutions and prisons.

Education is the greatest enemy of crime and where education is not possible crime is almost sure to raise its ugly head. The war cry against crime should then be "Education," and where education is difficult or impossible owing to physical defects or diseases, immediate steps should be taken to relieve or remove such defects so that children may be able to receive and profit by education and thus rear good, valuable and respectable citizens and save millions of dollars that can then be deflected into desirable channels.

New York City has 650,000 public school children and 30 percent of these children are two years behind their natural grades. Ninety percent of this misfortune is due to defective eyes, ears, noses and throats. Dr. Cronin found in one school 150 defective, backward children; 137 had bad tonsils and adenoids and 13 had defective eyes. These conditions were all

removed and almost all of the children became good and tractable pupils. This is a striking illustration of what may be done in our schools.

It must not be supposed that eye tests among school children are merely for the purpose of correcting ocular defects by glasses. Such instances are, of course, extremely frequent, and many children are retarded in their school work by near-sightedness or by some defects such as hypermetropia, astigmatism, muscular weakness, etc., which prevent easy and comfortable eye service, and which are usually followed by laziness, neglect of work, discouragement, truancy, and school abandonment. But there are many other ocular conditions which the school tests will disclose, such as the various forms of sore and red eyes, iritis, cataracts, cross eyes, and tear-duct diseases. Thousands of children already owe their emancipation from such diseases to the ocular examinations made in schools. One need not hesitate to say that every board of health and board of education in this country is committing a moral and social crime if they do not insist upon the annual systematic examination of school-children's teeth, eyes, ears, noses and throats.

In order to make the matter easy and practical Dr. Frank Alport of Chicago has prepared what he calls "A Visual Chart for Schools." This chart contains the usual test letters for testing vision. Each line also contains at least one letter for illiterates, which enables small children who do not know their letters to be accurately tested as to their visual capacity.

The lower portion of the chart contains the teachers' instructions, here reproduced, to demonstrate how easily the tests can be made. This portion of the chart should be torn or cut away from the upper portion on a line which is properly designated.

A Visual Chart for Schools. The advisability and necessity of examining the eyes and ears of children attending the public schools is now generally recognized by principals and teachers everywhere.

The system which is described furnishes a simple method whereby the eyes and ears of each pupil may be quickly examined by the teacher, a record made, and if an apparent defect exists, the parent notified. This system has been annually employed in many cities of this country and is rapidly being adopted by boards of education throughout the United States and other lands.

For making these tests a card of test letters has been planned, with complete instructions on each card. These cards are printed upon 6-ply Peerless board, 11x27 inches, with eyelet hole for hanging. The lower section, or that part of the card containing instructions and information regarding their use, is made so to readily be detached from the main body of card. The object of this is to allow the teacher to have before her these instructions while examining the pupil, with the test letters hanging at the proper distance on the wall.

Following are instructions for the examination of school children's eyes, for the use of principals, teachers, etc: Do not expose the card except when in use, as familiarity with its face leads children to learn the letters "by heart." First grade children need not be examined. The examination should be made privately and singly. Children already wearing glasses should be tested with such glasses properly adjusted on the face. Place the vision chart on the wall in a good light; do not allow the face of the card to be covered with glass.

The line marked 20 should be seen at 20 feet, therefore place the pupil 20 feet from the card. Each eye should be examined separately. Hold a card over one eye while the other is being examined. Do not press on the covered eye, as the pressure might cause an incorrect examination. Have

the pupil begin at the top of the test card and read aloud down as far as he can, first with one eye then with the other. For the use of those children not knowing the names of letters the sign "w" has been placed on each line in various positions. The child should indicate in which position this sign is placed. A cardboard symbol "w" can be easily cut out, which the child can hold in its hand. It should hold the figure in the same position as the one it is expected to see on the chart. For the purpose of convenience each line ends with the sign "w" in various positions.

Facts to be Ascertained. (1). Does the pupil habitually suffer from inflamed lids or eyes? (2) Does the pupil fail to read a majority of the letters in the "20" line of the test types with either eye? (3) Do the eyes and head habitually grow weary and painful after study? (4) Does the pupil appear to be "cross-eyed"? (5) Does the pupil complain of ear-ache in either ear? (6) Does matter (pus) or a foul odor proceed from either ear? (7) Does the pupil fail to hear an ordinary voice at 20 feet in a quiet room? Each ear should be tested by having the pupil hold his hand over first one ear and then the other. The pupil should close his eyes during the test. (8). Is the pupil frequently subject to "colds in the head" and discharges from the nose and throat? (9). Is the pupil a habitual "mouth breather"? If an affirmative answer is found to any of these questions, the pupil should be given a printed card of warning to be handed to the parent, which should read something like this:

CARD OF WARNING TO PARENTS.

After due consideration it is believed that your child has some eye, nose and throat disease, for which your family physician or some specialist should be at once consulted. It is earnestly requested that this matter be not neglected.

Respectfully,

.....School.

If only an eye disease is suspected, the words "ear, nose and throat" should be crossed off; if it is only a nose and throat disease, the words "eye and ear" should be crossed off.

It will be observed that these cards are non-obligatory in their nature. They do not require anything of the parent, who is at perfect liberty to take notice of the warning card or not, as he sees fit. They simply warn the parent that a probable disease exists, thus placing the responsibility on the parent.

If parents neglect the warning thus conveyed, the teacher should, from time to time, endeavor to convince such parent of the advisability of medical council. Teachers are urged to impress on pupils and parents the necessity for consulting reputable physicians.

The tests should be made annually at the beginning of the fall term, and should include all children above the first grade.

Each teacher should examine all the children in her own room and should report the results of such examinations to the principal, such reports to be signed by the examining teacher.

The following simple form of report, to be filled out by the teacher and handed to the principal, is suggested: Name of pupil. Do the tests indicate an eye disease? (Answer "Yes" or "No"). Was the pupil given a card of warning? This plan is simple and uncomplicated. No medical education on the part of the examiner is necessary and any intelligent teacher can make the tests without the slightest difficulty after a little practice. Every teacher should annually and systematically examine the teeth, eyes, ears, nose and throat of each child in her room. The school board should set aside one day in the early fall for this work. As there

are about forty children in each room, and as it does not take more than five or six minutes to examine a child, it will be seen that a room full of children can be easily examined in one day. Thus by subdividing the work, an entire city, of whatever size, can have all its school children examined in one day. If it is deemed inadvisable to give up a day to the work, a few children could be kept after school each day for a week, and the tests can be made in this way. The teacher should have two or three assistants, in order to expedite the work, and these can usually be found among the children themselves. One assistant should stand near the test letters and point them out; another should make out the "Warning Cards to Parents," etc.

No teacher should complain of this work, for she is the one who is the most benefitted by it. One child who, through some uncorrected teeth, eye, ear, nose or throat defect continually lags behind his class and becomes idle, mischievous and disturbing, will cause the teacher more trouble in the course of a year than would the making of these tests. They are really labor and nerve-saving devices and the teachers ought to recognize this fact and encourage them. This has been the case where the tests have been systematically carried out.

The annual systematic, preliminary examination of school children's teeth, eyes, ears, noses and throats by school teachers is an agency of enormous incalculable benefit to the children, to the parents and to the community at large. Then why not universally benefit by it, especially as the cost is insignificant?

In conclusion, I want to say that after examining the teeth, eyes, ears, nose and throat of the poor boy and having them corrected, the teachers should be warned not to discourage him by telling him he is dull and stupid, for then he will not try. They should tell him that they are interested in him and that they know he will win if he only will try; that he has it in him to stand at the head of his class and that they will help him. It is just as much their duty to inspire the boy with confidence in his own ability to succeed and to make something of himself as it is too see that his defects are found and corrected, for that inspiration received in the school room may be the starting point of future greatness. It makes no difference how poor a boy may be, how ragged his clothing, how dirty his face. Kindle a spark of ambition within him and you may live to see that very boy Governor of Oklahoma or a U. S. Senator, for history is full of just such examples.

Herbert Spencer says all the really first-class men who have lived, the very few who are supremely great, were poor and working men. He names Socrates, the stonemason; Aristotle, the Mountain Guide and horse breaker; Michael Angelo, the stone cutter, painter and architect; Leonardo, the sculptor, painter, civil engineer. Sir Isaac Newton was a farmer and a clerk; Shakespeare was the son of a butcher, and held horses at the entrance of a theatre; then he became a stage-hand and a theatre owner and wrote plays, simply because no one else could supply good ones. Bobbie Burns was a farmer; Charles Lamb was a book-keeper; Thomas A. Edison was a newsboy on the Grand Trunk Railroad; James J. Hill was a farmer, an express messenger, a steamboat agent; Henry Ford was a fireman and an electrician.



EMPHYEMA IN CHILDHOOD.*

Dr. G. A. Wall, Tulsa, Okla.

When the Chairman paid me the compliment of inviting me to read a paper before this Section, I selected this subject because I thought it might be interesting and of some value to the general practitioner, who is the one that first meets with the condition. It was not selected because it differs materially from the same disease in the adult, but because of its greater frequency in childhood and from the further fact that it often remains unrecognized until irreparable destruction to lung and pleura, or both, has taken place.

The disease is especially frequent in the early years of life, and occurs in early infancy. Cases are on record of the condition at eight weeks of age produced by a staphylococcus pyemia, and at ten weeks of age from a pneumococcal meningitis. That boys are more frequently attacked than girls is conclusively shown by one observer, who found in a series of 183 cases, 112 males and only 71 females attacked. The greatest frequency appears to be during the second and third years of life. The frequency of the disease during childhood is shown by the statistics of the Great Ormond Street Hospital for Sick Children, which institution admits children up to 12 years of age. Of the total admissions for five years, 1.7 per cent were cases of empyema. Of the causes, pneumonia seems to be the predominating one, lobar pneumonia the greatest exciting cause, but broncho pneumonia is not entirely to be overlooked, since cases do follow this disease in rare instances. The statistics of Dr. J. Graham Forbes, Pathologist to the Great Ormond Street Hospital, proves that the pneumococcus infection was the cause in the great majority of cases. He found that among 250 cases of empyema in children under 12 years of age, 186 or 74 per cent, were due to the pneumococcus alone; 21 were due to the pneumococcus mixed with the staphylococcus pyogenes; 17 were due to the streptococcus alone; 11 were due to the staphylococcus pyogenes alone; 1 to pneumococcus and T. B. mixed, and 1 to colon bacillus. These figures are to me conclusive evidence that pneumonia is the greatest exciting cause of empyema, hence bear the condition in mind in your pulmonary cases in children when they do not improve as rapidly as they should. Knowing this to be a fact, it is the physician's duty to find out as soon as possible whether or not he has a pleural effusion, for Osler tells us these effusions following pneumonia are purulent from the outset. Furthermore, we must realize that these purulent effusions seldom, if ever, terminate naturally in recovery, but, if left alone, usually terminate in death. Waiting for absorption and resolution to take place is a forlorn hope, bad practice and a delusion and a snare. Should it, by neglect, be permitted to go on until by chance it terminates spontaneously, then it must do so by one of three ways: (a) By absorption of the fluid, which can occur only in small effusions; (b) By perforation into the lung and bronchus, and (c) By perforation of the chest wall—empyema necessitates—and the most favorable way, but in all these methods the damage done to lung and pleura may be great, and, while recovery may take place, time alone will prove to the contrary.

A disease that leaves lesions behind and which may cause trouble later on is not cured, but only apparently cured. Tuberculosis is very prone to attack lungs following an empyema, for reasons that are obvious without explanation. Realizing that we have a pleural effusion, draw some of the fluid and have a microscopical examination made. The fact that it may appear as only a turbid serum is not conclusive evidence that there is no pus present and that it may not be teeming with pyogenic bacteria. Later on, when

*Read at Bartlesville Meeting, Oklahoma State Medical Association, May, 1915.

the fluid becomes creamy and opaque, the diagnosis is easy, but the disease may have caused grave injury.

A condition not as yet mentioned in text-books was first recognized by the late John H. Musser, who gave it the name of interlobar empyema. In this disease the pus is found in the spaces between the lobes of the lung, and occurs frequently following pneumonia, but it seems as though it is not easily recognized. In all probability many so-called cases of abscess of the lung are cases of this disease, whereby the empyema breaks into a bronchus and in this way discharges its contents, resolution taking place later on. It is found most frequently following catarrhal pneumonia, localized in or near the interlobular space, and is due no doubt to the infection of the pleura which is present to a greater or less degree in all cases of this disease. A glance at the anatomy of the lung will serve to make plain the manner of its occurrence. The symptoms are those of an ordinary empyema.

Because of the insidiousness of empyema, and from the further fact that the pneumonia may have begun and ended and no physician called, it becomes your duty to go carefully and conscientiously into the clinical history of all probable pulmonary disturbance in children, not forgetting that the disease frequently follows scarlet fever, and may follow measles and pertussis. Many times the history in the case is vague and indefinite. The mother tells you that the child was feverish and cross, had a cough, labored and rapid breathing, all these lasting from a few days to a week or more, when the child seemed to improve, but she notices that it does not gain as it should. Instead it seems to be wasting daily becoming emaciated, pale, with perhaps a hectic flush upon its cheeks; still coughs occasionally; the skin is dry and harsh, and it has all the appearances of tuberculosis. The diagnosis even now may be no easy matter. True, we may find dullness, but this may be more pronounced over the apex in front, or over the axilla than it is at the base. The breath sounds are diminished, but well marked bronchial breathing may be found over the dull area. Do not be misled by the well-marked bronchial breathing over the dull area into believing that fluid is not present. A short time ago I examined a case of empyema in which the chest filled up after the tube came out, and I would ordinarily have made up my mind that the lung was solid, since the most pronounced bronchial breathing was present, but in this case I was positive that there was pus present because I put in the tube a week or so before.

The empyematous child looks so much like a tubercular one that even after the empyema is found we are almost forced to believe that we have a tuberculosis. That the T. B. will cause empyema appears doubtful, the weight of evidence being against that proposition. True, we find occasionally tuberculosis and empyema conjointly, but an empyema due to tuberculosis is rare in infancy and childhood. Where we find pus in the pleural cavity in the tuberculous, we generally find upon close examination that the infection is a pneumococcal one and the affected lung an easy roadway for the bacteria to pass to the pleura. In early infancy an empyema produces profound constitutional symptoms, quite out of proportion to the physical findings, so that at this age the cause of the infant's sudden and serious illness may often be obscure and the condition first discovered post-mortem. Many times an empyema may closely resemble pertussis in its characteristics of vomiting, with paroxysms of coughing spells. The temperature is no reliable guide, for in the long-standing cases it may be normal, and even in recent cases it may not range very high when pus is present. On the contrary, in cases of serous effusion the temperature runs high, hence we conclude that plural effusion and high temperature means serum. The reason why we do not have high temperature when

pus is present is due to the fact that as soon as purulent matter forms within the pleural cavity, nature regards it as an abscess, the same as elsewhere, and attempts to wall it off, thereby limiting absorption.

The early recognition of these cases by the physician is of paramount importance, because only in early operation lies any hope for a perfect cure. The doctor who brings a case to the surgeon when the chest is bulging with pus deserves but small credit, for then the diagnosis presents no doubt, but the destruction to lung may be beyond repair and the foundation laid for an early tuberculosis. In these old cases the walls of the abscess are composed of the parietal and visceral pleura, upon which has been deposited a large amount of fibrinous material which coagulates, and later organizes. In some of these late cases, Beckman has found the limiting membrane one-half inch thick. As the fluid accumulates, the chest wall being unyielding, expansion cannot take place in this direction, hence the only way to make room for it is by compression of the lung, and this occurring, the limiting membrane of the abscess retains it in that condition, and if the condition is of long standing, the lung cannot re-expand because of the resistance of that membrane, even after the fluid has been allowed to escape. From this we are to conclude that if the abscess is drained early, before these adhesions become organized, the lung would quickly expand and obliterate the cavity. Not being a disease of the lung, the pulmonary tissue is but little, if any, involved in the inflammatory process, but both may coexist at the same time.

The earliest signs of an empyema are hard to define, but probably they are those of an acute fibrinous pleurisy, which may, but not of necessity, precede it. The passing into an empyema may be quite insidious. There may be no pain in the chest, very little cough and no dyspnoea, but the symptoms of septic infection with high leucocyte count are rarely wanting. In differentiating between serous effusion and empyema, the early signs are not of any great value, still a mention of them may not be amiss.

I shall only mention inspection in order to dismiss it, since in the early signs it plays but little part. Palpation is useful, for it enables us to more successfully determine the movements of the affected sides and to more accurately define the heart's impulse. By mensuration we can find a difference in the two sides of the chest, and in children the difference is great, having personally seen cases where there was as much as two and one-half inches difference between the wall and affected side.

In the very earliest stages percussion will be of minor value, but as the fluid accumulates the resonance becomes impaired, finally giving way to dullness. By careful and frequent examinations we are able to keep track of the height of the fluid, for as soon as it reaches the fourth rib in front the signs become very suggestive. We have at this time below the clavicle skodaic resonance, which is a hyper-resonance elicited by percussion over the compressed lung, immediately above a pleural effusion or basal pneumonia, but it is found in other conditions which the history alone will elucidate. It may also be found behind, just above the effusion limit. Still considers this a sign of very great importance and says that when it is present he does not hesitate to explore the chest many times, until pus is found, and that is has rarely played him false.

As before stated, while an acute fibrinous pleurisy is not an empyema, and does not always precede it, still its presence should be a danger signal pointing to a possible occurrence later on of a purulent accumulation in the pleura. The appearance of an edema of the chest wall, unless localized to a part of one side of the chest, is no evidence of pus, for with a serous effusion a very rapid and generalized oedema of the chest wall occurs many times. To me it appears that a careful history-taking and a careful and

conscientious interpretation of the same is the best and safest guide to the condition in the chest. In fact, this applies to nearly all our cases, whether they be empyema or some other disease. I am sure we are all too careless in our history-taking; we are too impatient in listening to our sufferer's story and many valuable hints in diagnosis are lost because of this. Our anxiety to pass on to the physical examination costs us many correct diagnoses, or makes a simple case more difficult. I am still of the opinion that the clinical history has not yet been superceded by the laboratory, but that the latter is only confirmatory and often times misleading. Moynihan constantly operates on the history alone, in cases of duodenal ulcer, and in 100 consecutive cases erred but three times. In one of the recent issues of the "Clinics," John B. Murphy has this to say:

"At a recent meeting of the American Surgical Society, and for the first time in all my connection with medical societies, the keynote in the diagnosis of practically all conditions under discussion at the meeting proved to be the clinical history. In this clinic (speaking of his own), we have been insisting for a quarter of a century that the patient's story is of paramount importance. In duodenal ulcer, gastric ulcer, in hepatic lesions and in gall bladder lesions, the members of the Surgical Association brought out the fact that the clinical history in diagnostic importance takes precedence over all other evidences of disease." In this disease the clinical history is of the greatest value, for when we have a little patient who has been sick for a week or so, with high temperature, cough, labored and rapid respiration, high pulse rate, who may or may not have had any of the eruptive diseases, and who does not improve after the acute symptoms subside, but on the contrary becomes pale, emaciated, with slight or no temperature, who has bronchial breathing over the flatness, then mark it down that you have in all probability an empyema, and now is the time to confirm your diagnosis.

There is only one way to do that, and that is by the trocar or aspirator. While many writers argue against their use, if properly used no harm can come from the careful handling of them. My personal preference is for the trocar. Beckman says: "I believe more good in the way of arriving at a correct and early diagnosis is to be gained from its use than the danger that may come from a late recognition of the disease. Personally, I have never seen any serious accident come from the use of the needle. In serous effusions, which may have become purulent, the relief from pressure attained by aspiration of a portion of the fluid often brings about a rapid absorption of the remainder."

Roentgen pictures, if made and interpreted by an expert, may be of value, but I question it. Among the complications of the disease, I shall mention only the two most serious ones, viz: Suppurative pericarditis and suppurative meningitis, because these complications cause the death of 50 per cent of children under two years of age, while in older children who are not so subject to these, fully 90 per cent recover if the disease is discovered within a week or two of its occurrence and properly treated, the recovery is usually complete; even the gap in the rib is usually fully healed in a few months and the breath sounds are normal. One can decide, with a fair approach to accuracy, what may be the nature of the infection from the appearance and color of the pus. Large masses of lymph indicate a pneumococcus infection, while seropus with some lymph indicates a streptococcus invasion, and the colon bacillus needs no introduction. In the infant the danger from a general pneumococcal infection makes the disease quite as dangerous as from any other infection, but in older children the outlook is better.

The treatment of empyema, which means cure, and no remaining morbidity is strictly surgical. The proper surgical treatment dates back to

ancient history, since the first man who recognized and gave explicit directions for the treatment of this disease lived 2385 years ago, and his name, Hippocrates. While most of his ancestry was a myth, still this great man lived. He advised free excision down to a rib, trephining the rib, incision of the pleura and free drainage. This sound advice was neglected or lost and for many centuries aspiration was the accepted method of treatment, and not until Lister's time, not quite 100 years ago, did the operation again take the place it so richly deserves.

The methods in vogue today are aspiration, incision between the ribs and resection of a rib. The results of aspiration as given by Paget in "Surgery of the Chest," show it to be profitable, if not good surgery. One boy aged nine had 58 punctures in sixteen months before he was cured. Another had 123 punctures in eleven months, and many similar instances of torture are recorded, and withal only six recoveries in forty-eight cases. In twelve cases treated by Velpeau all died. Dupuytren treated 58, and 56 died, and Sir Astly Cooper did not cure a single case. So much for aspiration, and still I am of the opinion that it may yet have a place in the treatment of empyema. Take, for example, these cases where the empyema is very large, and where the child's condition is so bad that an anesthetic seems risky, then it might be a good procedure to draw off some of the fluid one day, and the next day, or later, the complete operation may be done. As to incision and drainage through an intercostal space, I am convinced after having done this a few times that it has no place in the treatment of this disease, and that it is unsurgical and unscientific. The opening is too small to drain freely, and the tube used is of too small a calibre, and if perchance the tube comes out it requires as much trouble and skill to reintroduce it as it did to put it in primarily. I do not believe it is a whit better than is aspiration and about as much of a job as the resection of rib. My surgical experience teaches me to feel that there is only one logical surgical procedure in empyema, and that is by incision and resection of a rib. In my opinion, it is the only way by which we can obtain free drainage, for the opening is large enough to permit the use of large tubes, and only large tubes drain successfully in this condition. If the tube comes out, it is easily reintroduced, and during the intermission the opening will remain patent.

The technic of the operation may be found in any surgical textbook hence I shall not elaborate on it here. I shall mention only one sequel and its treatment. I refer to persistent sinus. I have had good results from the use of Beck's bismuth paste, and it is truly worthy of a trial. From all reports it is harmless if the bismuth is arsenic free. If bismuth poisoning should come on, the mixture may readily be removed by warm olive oil injected into the cavity. With the glycerine-formalin preparation, I have had no experience, but the weight of surgical opinion seems to be against it.

In conclusion, I wish to impress upon you the great necessity for eternal vigilance in your pulmonary affections in infancy and childhood, and don't neglect your scarlatina and measles cases. If they do not recover as promptly and fully as they should, think of empyema and having thought of it, search for it. By following this rule you will save yourself much embarrassment and many lives.

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IMPORTANCE OF RECOGNIZING AND APPRECIATING DISEASED TONSILS AS A FACTOR IN CONSTITUTIONAL DISEASES.

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The study of tonsils are thoughts of ancient origin, as many of our predecessors have spent hours of toil to find how best to treat and care for two small glands located in the fossa tonsilaris.

The anterior boundary is formed by the palato-glossus muscle; the posterior boundary by the palato-pharyngeus muscle, these uniting above to form the soft palate. The outer wall of the sinus tonsilaris is formed by the superior constrictor muscle of the pharynx.

It is important to note that the tonsil is very richly supplied with blood which comes from the tonsilar and palatine branches of the facial arteries, branches from the descending palatine, ascending pharyngeal and dorsal linguae, of which the tonsilar branch of the facial is the chief source.

The nerve supply of the tonsil comes from the ninth, or glossal pharyngeal, and sphenopalatine, or "Meckel's Ganglion," and these in turn communicate with the jugular and petrous ganglions, the tympanic, auditory, olfactory, facial and vagus nerves.

The lymph which drains through the tonsils, directly or indirectly, comes from the posterior part of the nose, the naso-pharynx, the mouth, including tongue and teeth. After passing through the tonsil, the lymph drains into the superficial and deep cervical lymphatics and they, in turn, into the deep veins of the neck of the right side, and the thoracic duct of the left.

I bring the blood, lymph and nerve supply before us to refresh our minds of the many ways by which these small lymph nodes, when diseased, may affect the general system.

When once diseased, these glands are no longer the barrier nature intended them to be, but furnish a perfect media for germs to grow and reproduce themselves. The areas then that may impair the function of the tonsil and thereby throw septic material into the circulation, are cancer of the nose, tongue or lip, ulcers of the septum, tuberculosis of the same region, pus in any of the sinuses of the head, decayed teeth, and diseases of the mouth. I do not think that tonsils become primarily involved as often as is thought, but are more often affected through the portals above mentioned. Then we have as a result of these infections, directly or indirectly adenitis, myocarditis, endocarditis, so-called rheumatism, nephritis, uveitis, urethritis, appendicitis, gastritis, cerebro spinal meningitis, infantile paralysis and often an attenuated form of septicemia.

Since we have this number, and more, infections following diseased tonsils, is it not more important that we should look after these patients as though we would a beginning cancer of the uterus? Moreover, it is the belief of the writer that the doctor who tells the patient to wait and see if the diseased tonsils won't atrophy, makes a more serious mistake and does his patient more damage than the doctor who will not advise his appendicitis cases to have surgical interference, or beginning tuberculosis cases to take treatment.

As we have seen so often the damage done to the physical and mental development and the cosmetic disfiguration to our patients, it is important that we should remember that the tonsils have a definite function in early childhood in order to recognize the tonsils that should be removed.

⁺Read before Oklahoma State Medical Association, Bartlesville, May, 1915.

Tonsils should not be removed unless there is some special indication before the child is three or four years of age. The small buried or submerged tonsil, associated with large cervical glands, should always be completely removed unless some other definite cause can be found for the condition. This is the fibrous tonsil that had the abscess at its base and can only be found by pulling the tonsil from its bed, and pushing the anterior pillar out of the way.

Tuberculosis is often of tonsilar origin. One of the most important points to be considered in judging whether a tonsil should be removed or not is the size of the tonsil in relation to the individual throat. All tonsils which seriously interfere with the respiration should be removed. Many local pathological conditions are caused by diseased tonsils. Many cases of otitis media could be prevented by the removal of tonsils. There is a distinct relation between diseased tonsils and many general diseases. Then chronic tonsilitis is only exceptionally a harmless local disease. In a majority of cases it leads after a shorter or longer period to important disturbances of the general health, and the removal of chronic tonsilitis is in most cases a pre-requisite to a permanent cure of secondary diseases which depend upon it. Where recovery does not take place in a short time, examination should be made for the existence of other chronic infectious conditions, such as affections of the accessory sinuses and teeth. The only certain method for the cure of chronic diseased tonsils is the radical removal, as neither the conservative measures nor the incomplete method of operation afford prospects of a certain cure. Counter indications to the method of radical removal of the tonsil have neither a practical nor a theoretical basis. The technical difficulty of operation are for the most part overestimated. Experience shows that there is no particular danger depending upon the operation. Unfavorable results have not been seen or been observed to follow it, nor are they to be expected on the basis of our knowledge of the anatomy and pathology of the faucial tonsil.

DEVELOPMENT OF THE CHILD.*

Carl Puckett, M. D., Pryor, Okla.

I have chosen this subject principally because I expected a number of the laity to be present. The question of inviting the mothers and others interested of Bartlesville was discussed last year and the chairman of this section reminded me of this fact in January of this year, when he asked me to prepare a paper for this section, andsuggested that I should prepare my paper along such lines.

I will discuss the child from one year old up to six years. At about the age of one year the young mother, who makes the raising of her child her chief aim in life, which is proper that she should, and who wants to raise it properly, begins to look on the question as a serious business, which it is. The young mother (I say young because the experienced mother usually has her own way of doing things and will not so readily adopt new ideas), should have some competent authority to guide her. This is not always obtainable from her mother, grandmother or neighbors, although they are usually overflowing with advice and there is so much of it that even if some of it were good the mother would be unable to separate it from the bad.

In my opinion there should be some standard work on children in any home where children are being raised, such as Griffith's "Care of the Baby" or Dennett's "The Healthy Baby." An authority of this kind, if followed, will enable the mother to be certain of her course and prevent confusion of

*Read before Section on Pediatrics, Oklahoma State Medical Association, Bartlesville, May, 1915.

ideas which are advanced by those with whom she comes in contact. I may also add that it has been my experience that a work of this kind in the hands of a mother does not make her overconfident of her ability to care for her child in sickness, but on the contrary, teaches her where her efforts should cease and those of a physician begin. She is also more competent to judge whether she has an up-to-date, intelligent physician or not, and in such cases it behooves many of us to be more progressive and get out of any rut into which we may have fallen.

In getting away from generalities, we come to a question that vitally concerns the baby, and that is the diet after one year of age. In the first place I will mention a few "don'ts." Don't begin to sweeten food to tempt the child as soon as it is taken from the breast. On the contrary give no sugar, sweetened cookies or syrup. Don't fix up highly seasoned or fancy dishes to tempt the child's appetite. Plain, wholesome, and well-cooked food is all that is necessary, with milk predominating, which is best pasteurized for children up to the age of three years or more. Don't keep the child's hands full of eatables from morning till night, but arrange for extra meals at regular intervals so that he may not suffer from hunger, but be hungry enough to have a healthy appetite at meal time.

A diet list for a child a year old should consist of milk with stale bread, well cooked porridge of oatmeal, cream of wheat or farina, a soft-boiled or poached egg with bread broken in it, bread moistened with dish-gravy, bread thinly buttered, and tapioca or rice pudding in small quantities. Of course this whole list is gradually gone into from the breast and milk alone and gradually increased as the digestion permits. By the age of 18 months we may give the child baked potatoes, mashed and moistened with dish-gravy or beef juice, chicken broth with rice, some minced white meat of chicken, or turkey, or minced roast beef or fish, toast and butter, custard, and rice pudding made with milk.

At two years of age a child may have a small amount of beefsteak, roast chicken or beef, rice, macaroni. By the age of three years the child may and should begin to eat many kinds of meats, broiled or cooked so as to be easily digested, and may also have a greater variety in the manner of cooking his eggs. Proteids make growth and are to be found in meat, eggs and milk. He may also have potatoes, spinach, peas and green beans, most any kind of fruits if stewed and sweetened; also may have most any kind of light puddings and occasionally ice cream. A good general rule to remember in feeding a child is that a healthy body is made from pure and wholesome food of a substantial character and not from puddings, candies, starches, and nick-nacks. I may here add that adenoids, large tonsils and bad teeth do not come from wholesome food and fresh air, but from candies, sweets, stuffy rooms, and general negligence. Everyone wants his or her child to be strong, robust, self-reliant and not pale, puny or made of a "bunch of nerves." Children become one of these extremes not by accident but by food, example and environment.

A child must have food for perpetual motion and growth. If we would have him steadily grow and at the same time be natural by continued motion, we must have wholesome food which is all put to use by assimilation and not allow him to stuff his stomach with a lot of waste, which may taste good to him but which acts as a detriment by occupying valuable space in his anatomy and because of its unnatural qualities seriously interfere with the digestion of proper food. In regard to food, two quotations from Dr. Woods Hutchinson would be to the point: "Still abideth the trinity of growth; food, air, exercise; these three, but the greatest of these is food." Also: "Any child that does not eat, and eat at least once a day, like a saw-

mill, with eagerness, avidity, and an audible noise, unless restrained, is not healthy."

Another question that the mother is usually concerned about is the proper exercise for the different ages. A child's life is made up of food, play and sleep, which makes these subjects of much importance. The first thing to do is to dress the child so he can exercise every muscle of his body without hindrance. Let the yearling take his own time about walking. Don't try to make him precocious in this line, for it is always injurious. His instincts tell him when he can walk. When he does begin to walk we must remember that he cannot take long journeys on foot. Allow him to walk as much as he wishes and then furnish some means of riding. As he gets older a tricycle is very good. There is a great deal of good exercise to be had from one that amounts to sport. Another form of exercise which is very good for growing children is swimming. It is well to guard against over-exercise in this, for the excitement is sometimes so great that they may go on to complete exhaustion. All outdoor sports should be encouraged in all children—girls as well as boys—and the same games are well for both, at least till girls are twelve years old or more, and they should still be encouraged to play outdoors.

Dr. Griffith suggests that a girl should be a tomboy as long as she pleases; that it is easier to tone her down and "make a lady" of her after a while than it is to tone her up if she has no good constitution on which to build. Don't try to make "ladies and gentlemen" out of children, but allow them to be natural and dirty most of the time. If the weather is too bad out of doors, see that their playrooms are well ventilated and allow them to make all the litter and noise they wish. Some may think that there is too much stress laid on exercise and that the mind is neglected. If the child's play is guided and his impulses somewhat checked his mind will come along all right with the growth of brain, muscle and bone. An active, sturdy child is always considered "bright" and promising. Like the bear's cubs in the old legend, which were born as shapeless lumps and "licked into shape" by the mother bear, children are born little lumps of possibilities and played into shape, both body and mind.

We must not forget that pure, fresh air is also absolutely necessary for normal growth and development. Oxygen is essential if we would have red blood, and is only to be found in normal proportions in pure air. It matters not how much exercise a child may take, he will not be robust and strong unless he has plenty of oxygen both day and night. This is necessary for good brain growth as well as physical, and further, the morals and disposition of a child are more likely to be right if he is allowed to grow up in lots of sunlight and pure air, which is only to be had in God's out-of-doors. We hear so much of the influence of environment on the morals of children, and that usually refers to their associates, but really goes farther and includes the atmosphere, and that not figuratively speaking. It seems that oxygen stimulates the good in humanity as a whole, and dark rooms, foul air or dirty alleys stimulate the criminal instincts. Food, also, plays an important role in the making of character.

Another question of importance in a child's development is sleep. Up-building processes are at a minimum while we are awake and at a maximum while we sleep. Sleep is the best tonic in the world for a child, or anyone else for that matter, and he must have not seven or eight hours in the twenty-four, but ten, twelve, fourteen or sixteen, according to age and inclination. Don't try to keep him awake by an unnatural amount of amusement, but rather encourage him to sleep. Some of our puny, pampered children need instead of more play and amusement more sleep, and that with windows wide open.

I wish also to discuss the question of mental training as we usually understand it, which is reading, or training to do anything with accuracy and precision. Very little should be done toward development along these lines till the child is six years old or more, and then his play should only be guided and his mental work should be play to him. Games are devised as a means by which physical exercise can be had. The same would be as good to encourage mental effort. The chief business of a child is to grow up, out and all around, in no particular direction. This applies to the brain as well as body. Strong mental effort will not develop a child's brain but stunt it and make him narrow and incapable in later life. It is well to consider the fact that a man's life is measured by its breadth as well as length. Development of muscle comes after growth of the body, and development or training of the faculties comes after the growth of the brain. A precocious child is not to be desired—that is, one who can read very early, write or memorize. Nothing is gained by this but much harm may be done. A child's eyes are far-sighted and in the process of development become such that he can accommodate the eye to nearer objects. This is a process of natural development and by forcing him to accommodate himself to closer objects cause an overcorrection of the lenses producing near-sightedness in later life. After ten or twelve years of age the eye is fairly well fixed and the shape is not changed much by use, while it may become fatigued. Also, if a child is taught to read and write too early and too much is made of these accomplishments, there is the possibility of too much attention to such things when he ought to be romping and growing. And, as mentioned above, we are more likely to have mental stunting than mental development. A child taught to read and write at the age of four years will be outstripped in later life by the one who "never saw a letter" till he was seven if he be a strong, robust, fresh air child. Further, there is very little good to be had from kindergarten training unless it is merely supervised play. It is unnatural for a child to sit on a stool longer than 15 minutes, so don't make him do it. If we look carefully after the physical in children the mental will not be such a question. School work should never interfere with the general health. There should not only be well ventilated school rooms but plenty of outdoor play to keep the physical body to the very highest pitch of efficiency, and the mental body is most likely to be. It takes pure, red and actively moving blood to make keen thinkers as well as strong bodies. A child's years spent in school are certainly wasted if it leaves him an invalid. What doth it profit a man if he gains the wisdom of ages and loses his health, or what would a man give for his health? In closing, I will give a quotation from Horace Mann, which applies to this part of the subject: "All through the life of a feeble-bodied man his path is lined with memory's gravestones, which mark the spot where noble enterprises perished for want of physical vigor to embody them in deeds."

HYGIENE IN HOME AND SCHOOL.*

Dr. T. A. Rhodes, Goltry, Okla.

Hygiene is the science of health, or the observance of the laws governing health. God created the universe and everything that is in it, down to the minutest particle, with laws governing His creation, and these laws are unchangeable and immutable, and it must as surely follow as the night follows the day that the violation of nature's laws will bring a penalty.

"Whatsoever a man sows, that shall he also reap," holds good in the physical world as well as in the spiritual, and this brings us face to face with the great question of obedience or disobedience to the law, be it natural law or civil law.

*Read before Section on Pediatrics, Oklahoma State Medical Association, Bartlesville, May, 1915.

Every ache, every pain in our bodies, is but a warning that some law is being or has been violated; every case of sickness, no matter what, is beyond a question the result of the violation of some hygienic law. It is difficult sometimes to say just when or how the violation occurred, but it occurred just the same, and we can find it if we search far enough.

We will never be able to know and understand all the laws that govern nature or the universe, consequently we will never understand all the laws of health; but with what we already know, and what we are learning, and what we will learn out in the future, we will eventually know a good deal about them; not that we will ever have a perfect knowledge of them, and thus prevent all sickness, but we will finally learn so much about these things that the practice of medicine will be almost entirely preventive instead of curative, and sickness of all kinds will be reduced to the minimum; physical suffering will mostly be done away with, and the average human life will be much lengthened. These things must follow a more thorough knowledge and observance of hygienic laws.

There is no period in life so good, or opportune, as during childhood to begin the teaching and practice of hygiene. The impressions made in childhood are the most lasting, as no doubt all of us could testify; but as the subject of hygiene is so broad it could not be treated in a general way in so short a paper as this must be, I have been limited to the home and school.

I believe I can state without successful contradiction that the home offers the best opportunity for teaching the child hygiene. It is the one place where authority is absolute. The parents of children can, without question or interference, emphatically enforce any reasonable rule or regulation of the home. The child is bound to obey the parents. This cannot be done in public institutions to the fullest extent.

The great difficulty met with in teaching hygiene in the home is that the parents are too often woefully ignorant of such things themselves, or, if not ignorant, they are so indifferent, or indolent, they don't care whether their children are taught them or not. It doesn't matter whether it is ignorance or indifference, the result is the same. The child is allowed to grow up without knowledge of hygienic laws.

The home should be the cleanest place on earth, because in it the baby comes into the world, grows into childhood, on up into adult life (that is, if it escapes all the snares, pitfalls and dangers of childhood), and the kind of man or woman it makes physically, is largely determined by the hygienic attention given the baby and child. If the child is to grow up into a strong, healthy adult, it must have a reasonable application of the laws of health.

In this short paper we can only notice a few of the things that make for or against the child's welfare in the home and school. I think the air breathed in the home should claim our attention first. As doctors we all know the importance of fresh air. Many of our clientele know of its importance, and some of them apply their knowledge to good advantage, while others, either from ignorance or indifference, act as though they thought fresh air would be poisonous, or contaminating, or in some way be very injurious to their families' physical welfare. How often have I (and I am sure every doctor here has had the same experience) gone to the home of many of my patrons and found a child, or perhaps several children, sick with diphtheria, measles, scarlet fever, pneumonia, tonsillitis, or some other trouble, to find the sick ones and well ones all in the same room, with every door and window tightly closed, and sometimes every crack and crevice about the room calked with rags or something of the kind, preventing in this way the possible entrance of fresh air into the room, or

the exit of vitiated air, and more than likely a red-hot stove going at the same time, burning what little oxygen the room contained. I often wonder how many patients get well as do, under such circumstances. In many such instances I have opened the windows and arranged for ventilation, and just as often have I had the parents remonstrate and say the air would give the patient cold, and make it worse, and more than likely, in spite of all talk and instruction, I would return next day to find the doors and windows closed and the cracks calked as tight as ever, the stove perhaps a little hotter, and the patient a little bluer and sicker. And then I would find myself wondering if some people would ever get any sense, and if it was worth while to try to teach them anything about the laws of health. I find it very hard sometimes not to be pessimistic, but then I know we are supposed to be optimists, and hammer away whether we see any improvement or not, and we do.

I think a little should be said about water. If we were to judge all homes by what we see in and about some of them, we certainly would conclude that it either never rained, or there were no wells or cisterns, or an application of a little clean water would be a crime against humanity.

When I see the lack of application of water in some homes, I am reminded of the little ditty we used to sing: "Mother, may I go down and swin? Yes, my dearest daughter! Just hang you clothes on a hickory limb, but don't go near the water." I have seen children, and grown people, too, as to that, who looked as though they never had a good bath in their lives. Their skins were so rough and dirty it reminded one somewhat of a hippopotomus—I mean the skin, not the people. I am glad to observe that this condition is not the general rule, but many homes could be made more enjoyable and their inmates could be made much more fit to enjoy them by the simple application of a little clean water. I don't believe that getting in a bath-tub every day and scrubbing the skin with some rough rag or towel, until it almost bleeds, is necessary, but I do believe it should be washed often enough to keep it cleansed of dirt and sweat and its function active, also it should be covered with clean clothing, whether coarse or fine. John Wesley said: "Cleanliness is next to Godliness." We can't be gods, but we can get plenty of clean water and keep our bodies and clothing clean.

Great emphasis should be laid on the feeding and nursing of children. Babies should have regular and stated times for nursing. For the first month after birth, about every two hours; second month, every two to two and a half hours; about three hours for the third month, and so on, according to age. I believe there is nothing that will make more for the baby's health and welfare than regular and proper nursing or feeding, and nothing can give more trouble or do more damage or give the doctor more anxiety than irregular or improper feeding. Mothers don't seem to realize that the baby's somach needs rest; that the cross, peevish, colicky, crying baby, with indigestion, and perhaps diarrhea, is so nine times out of ten because of their indiscretion in feeding or nursing. It is hard for them to understand that a baby is not hungry every time it cries or frets. They should be taught and made to understand that to nurse a baby every half hour or hour is, with few exceptions, the cause of their crossness, and that to put a fresh batch of milk into the stomach where the process of digestion is still going on is entirely wrong and a great injustice to the child. The idea is to give the stomach time to digest and dispose of one feeding, and then rest awhile before pouring in another batch. It is one of the hardest things I meet in practice to get mothers to understand that it is not the amount a baby takes into the stomach that does it the good, but the amount it digests and assimilates. When mothers learn and

practice this they will have better and healthier babies and children and a little time to do something else besides trot their babies on their knees and give them paregoric.

After the baby has grown to childhood, and even to men and women, they often form the very injurious habit of eating between meals or at all hours of the day. It is a crime against the child to allow it to run from morning till night, with a hunk of bread and butter, or some other stomach-stuffing food in its hands, when by so doing it will ruin its digestive apparatus if it has not already been ruined by the way the mother nursed it when a baby. I say away with the infernal habit of stuffing babies and children between meal times. Let mothers learn and remember that babies and children have stomachs and that their stomachs need rest as well as their bodies if they would have them healthy.

The clothing and dressing of babies and children should receive proper attention. They should be dressed according to the weather. A child should be dressed sufficiently warm in cold weather to keep its body from becoming unusually chilled; but too often, unfortunately, children are allowed to go poorly clad in cold weather, very much like some of our women—about enough clothes to make a jug stopper. Such improper dressing is, I am sure, the cause of many cases of colds, pneumonias and kindred diseases. Often children get the clothing wet or damp and the parents allow them to keep the wet clothing on, apparently thinking it will do no harm. They don't seem to realize that chilling the surface of the body drives the blood internally, creating congestion of the internal organs—a condition favorable to the development of many diseases. Then I have seen women take a new-born baby in the hot summer months, put a flannel shirt on it, two flannel skirts, a dress, then wrap it in a blanket and put it in bed with its mother, and cover it up with a quilt or two, and then wonder why the baby was so cross. When told it was dressed to warm they would turn up their noses and sniff, as much as to say, "You don't know what you are talking about. I guess I know how to dress a baby," and then I would think God pity the baby. I would that some old women would either learn that babies are human beings and should be treated as such, or die and go to heaven and give some one else a chance to do something for the babies and children's comfort and welfare.

The fly—yes, the poor, old fly! He certainly has a multitude of sins to his credit, and if he is guilty of all he is accused of his stay in purgatory will be rather indefinite. I believe the fly is guilty of many things, but I believe he is often made the scapegoat for the offenses of others. On him has been laid much iniquity that does not belong to him.

I have seen him in some homes flourishing, it seems to me, in all his glory. I have seen some homes where it seemed the screens were to screen him indoors instead of outdoors. I have heard his hum and roar like the sound of swarming bees. I have seen him digging, boring and sucking at the eyes, nose, mouth and ears of children who have been unfortunate enough to be inmates of homes where he had full sway. I have seen him roam at will over the food consumed by these same children, when I well knew he had but recently come from the manure pile or the privy vault, and I have wondered at such times if any of the family would escape some serious sickness transmitted by his flyship. To my surprise, after all I have read about his wonderful ability to transmit disease germs, many families have escaped without a single scratch.

I would not underestimate the importance of swatting the fly. I say swat him, kill him, exterminate him. He is a nuisance and a menace, but while we are swatting let us swat some of the other things that menace the welfare of our homes. Ventilation, proper feeding, proper clothing,

proper bathing and cleanliness of all kinds is just as important as killing the fly. I would not say to be 'less warlike toward the fly, but I do insist that we make the battle general all along the line, so when the fight is won the victory will be complete and not just one little vantage point gained.

This paper is growing to long. I must quit. There is much more to say, and much more should be said, but it cannot all be said in so short a time. If I shall have succeeded in causing some discussion of this important topic, or made some impression for good on some mother here, I shall feel repaid for writing this paper.

For the last part of my subject, suffice it to say, that what holds good in the homes holds good in the schools. The conditions are somewhat different, but hygiene is hygiene wherever found and it should be applied to home, school, town, city and country at large. And I am glad to make this observation—that the people generally are becoming aroused to the importance of public hygiene and giving willing aid to the authorities in many places in enforcing the laws governing it.

TUBERCULOSIS OF THE KIDNEY*

Dr. John Overton, Tulsa, Oklahoma.

The study of this condition presents many interesting features. It has been shown by many investigators that in acute miliary tuberculosis the bacilli are practically always found. In cases of pulmonary tuberculosis probably ten per cent show bacilli, and in those dying from tuberculosis the presence of renal disease is variously given from 25 to 70 per cent. Israel claims that one-third of all the suppurating diseases of the kidney are tubercular in nature. It has been shown that tuberculosis may enter the body without leaving evidence at the point of entrance, and so it is believed that it may leave the body through the kidneys without producing disease in them. So it is possible to find tubercle bacilli by staining and cultural methods and to produce the disease in animals by inoculation from such cases without pathology in the kidney. If the kidney is infected with tuberculosis it may be of miliary or non-surgical form, the caseous form, pyelitis, catarrhal or ulcerative, or we may have a kidney completely destroyed, leaving nothing but a large pus sack with the initial infection being displaced by one of mixed variety.

Secondary to the disease of the kidney we have involvement of the ureter, and in about 80 per cent of the cases involvement of the bladder. In practically all cases the infection is hematogenous in nature and hence descending. The possibility, however, of an ascending infection from genital tuberculosis is allowed, especially where there is some obstruction in the bladder and hence "damming back" of the urine. It is also believed that in practically all cases one kidney is diseased some time before the other. The average length of life after its recognition is five years, though many die sooner. Some pathologists claim to have found healed tubercular lesions. This is doubted by many and cases of spontaneous recovery are thought to be one in which the ureter is blocked and the kidney undergoes what is expressed as an autonephrectomy. When this disease was first attacked by surgery the immediate and remote mortality was necessarily high, but more recently on account of earlier diagnosis and better judgment it has been reduced as low as three per cent in about three hundred cases at the Mayo Clinic.

Diagnosis is sometimes comparatively easy, especially where all the suggestive signs are prominent, but frequently the disease is latent, or,

*Read before the Oklahoma State Medical Association, Bartlesville, May, 1915.

as Dr. Gordon of Vancouver expresses it, silent, and is therefore overlooked or discovered late. Where a patient is losing weight and strength, without other assignable cause, following a careful examination, we should suspect this disease and endeavor to eliminate it or prove it. Obtain a specimen of urine and if pus or blood are present careful and repeated examinations should be made for the bacilli. On account of the presence of other acid-fast bacilli, especially the smegma bacillus, we should use the utmost care in the collection of the urine. In the male, Young advises a thorough cleansing of the penis, irrigation of the anterior urethra and the passing of the urine in three separate glasses, examination only being made from the last portion. In the female it is thought by some that the specimen should be obtained only by ureteral catheterization. Where we fail to find them and still suspect their presence, we should make repeated examinations, especially following any local or constitutional exacerbations. The injection of tuberculin may be of benefit; the use of cultures may clear up things, but we must not fail to appreciate that we may have tuberculosis in conjunction with gonorrheal or other infection. Should these tests fail, then use the inoculation of guinea pigs by catheterized specimen; should it prove positive, this clears the diagnosis; should it prove negative, it still leaves us in doubt. Occasionally a radiograph may disclose diseased caseous areas in the kidney that are not discharging bacilli into the urine. The presence of pus in an acid urine from which no culture can be obtained is very suggestive. Hematuria is a common sign and quite a free flow of blood may be an early evidence of disease of the kidney, as it sometimes is in pulmonary trouble. Polyuria and diurnal frequency are common symptoms. Pain in the kidney is not usually present unless there is an intermittent obstruction from within. Tenderness is an unreliable sign, since the sound kidney is often the more tender. Tumor of the kidney may be present and is generally due to a pyonephrosis.

Symptoms of cystitis most frequently call our attention to the trouble. The bladder is very sensitive to the introduction of any foreign solution, especially silver nitrate. The cystoscopic findings vary from a slight redness or oedema about the ureteral orifice to extensive ulceration and numerous nodules.

If then we have suspected tuberculosis of the kidney and have proved it by the various methods indicated, what should be the treatment? In the first place we should determine absolutely that there are two kidneys, that only one is diseased, or badly diseased and that as far as we can tell by the present functional tests, the sound organ is sufficient for the demands that will be made upon it. After doing this shall we carry out a general hygienic course of treatment, or resort immediately to surgical methods? It is generally believed by those who have given most study to this affection that since we cannot give the kidney functional rest we should resort to operation as soon as we have obtained all data relevant to the case.

Operation decided on, in some late cases of suppuration, we are forced to do a simple drainage operation. In practically all cases, however, lumbar nephrectomy is the operation of choice. In doing this operation the chief dangers are hemorrhage and injury to the peritoneum, pleura, or, as lately called attention to by Dr. W. J. Mayo, the duodenum. This may follow injury with the forcep in attempting to clamp bleeding vessels, or later, to a slow infection of the stump with involvement of the duodenum and head of pancreas.

If the ureter is obliterated by the disease, he claims that ligation and sterilization of the stump are sufficient. If the ureter is patent and there is no mixed infection, five to ten minims of a 95 per cent solution of

phenol are injected and the stump ligated. In both these instances do not use drainage. When the kidney is still secreting and a mixed infection exists, it is safer to bring the ureter out and suture it in the external wound.

I claim no originality for any of the ideas given in this paper. I desire to express my indebtedness to standard text books and articles appearing in the journals, most of which I cannot now refer you to. Recently I have consulted several articles which I have quoted from, namely, one by W. J. Mayo and one by Lawrason Brown in the A. M. A. J. for March; one by Dr. Gordon of Vancouver, B. C., in Surgery Gynecology and Obstetrics for February, 1915. I feel that this subject is worthy of the best efforts of the best men and hope you may profit by this study as I have done.

DISCUSSION.

Dr. A. S. Risser, Blacklell: I don't think it is quite fair to ask me to open the discussion on this subject, as I came in late and did not hear all of the paper. The subject of Tuberculosis of the Kidney is one which has only been opened up within the last five or ten years and, as is true with so many other subjects, the moment our attention is called to the subject we see new visions open up before us.

We often find cases of so-called bladder trouble, irritation of the bladder, and I have a case of a young man at our town who for about four years has been a sufferer from bladder trouble. His first symptom was an increase in the number of times of urination, both nocturnal and diurnal, so that for a course of about two months or so he was unable to do any work of any kind because every ten or fifteen minutes he found it necessary to urinate. A microscopic examination was made and bacilli were found in the urine. The whole bladder seemed to be ulcerated beyond any possibility of repair. By a slight treatment and means of rest that young man grew absolutely well for two or three years. About four months ago he had a return of the same symptoms, was absolutely uncapacitated for his work, and was run down in flesh until he was nothing but skin and bones. After a length of time the disease has receded, and at this time he is doing a man's work. Those are the things that often throw us off our guard.

Dr. Clark, El Reno, Okla: There is one thing that has been mentioned, and that is a careful diagnosis. Be equally sure that at least one kidney is good before you take any surgical procedure. It is fairly easy for the diagnostician to tell whether a man has one or two good lungs, and it is fairly easy to diagnose the condition of the abdomen, but it is not nearly so easy for a man to discover whether his patient has one diseased kidney, or two diseased kidneys, or any at all. The finding of the bacilli in the kidney is often very hard. I think, perhaps, Dr. Overton in his paper said that it may require an examination of the urine time after time before one may be able to tell whether the kidney contains bacilli. There is one thing that should guide you and that is blood in the urine; that is almost a sure sign of disease. In the case of a young woman I observed who was brought into the operating room for operation. She seemed to be in fair physical condition almost normal, so far as the flesh was concerned. Dr. Bilege was in charge of the case, and operated. One kidney was found to be passing almost entirely pure blood, although it appeared as though there were two diseased kidneys. It may be that two diseased kidneys will keep up a secretion sufficient for a number of years, while if you remove one of those kidneys it may decrease the secretion of the kidney remaining to such an extent as to have your

patient go into urinemia and pass away. The point is simply a question of diagnosis. The means are placed at our hands and before a man goes ahead on a matter of this kind he should be absolutely sure of the ground that he stands on.

Dr. Huffman: It seems to me that we should have no errors in diagnosis when we have the advantage of using the cystoscopic examination to observe the kidney. I believe especially in the female there are a great many conditions diagnosed as pus kidney when they are simply local conditions of the bladder, or conditions of other parts of the pelvis.

Dr. Overton (in closing): I purposely did not take up the examination of the bacilli in detail. From what observation and experience have taught me, I believe it takes more hard work to accurately diagnose bladder and kidney conditions than any other. I call to mind a young lady of 18 years of age who had both ureters catheterized and urine examined by a competent man, with positive finding of T. B. from both. She, of course, could not be operated on and was given only a few months to live. She, however, improved very much in health and bladder symptoms and later married.

Another case was of a woman 45 years of age whose first symptom was sudden, sharp hemorrhage. She developed a severe cystitis. Cultures were negative; tubercle bacilli were found after three examinations from right kidney. Tuberculin reaction was mild. She was in a very run-down condition. Pyelography was practiced and ureter appeared to be enlarged or thickened. She requested operation. Nephrectomy was done under spinal anesthesia and kidney was found to be markedly diseased. She stood the immediate shock well but died in two weeks, due partly, I believe, to infection from the ureteral stump. On post-mortem the left kidney seemed to be normal.

Dr. Kuhn, Oklahoma City: I am afraid we are going to infer from this paper that tubercular kidneys are generally surgical. I do not think that tubercular kidneys are surgical. I see quite a few cases and am confident that tubercular kidneys will heal just as well as a tubercular lung if given an opportunity to do so. I believe a tubercular kidney should be given an opportunity until shown otherwise. I think they should be considered in the light of a medical case and not a surgical case.

Dr. Overton: I did not mean to say that where we have proven that one kidney is badly diseased from tuberculosis and that the other seems to be in good condition then operation is indicated. Of course, various circumstances may affect the time of operation. This is my opinion, though of course it may not be correct.



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Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

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EDITORIAL

OUR NATIONAL MEDICAL UNPREPAREDNESS.

Amid all the clamor over the country for a larger navy and army, it is refreshing to note that there is also a persistent demand for a medical department in keeping with the needs of any probable contingency. In the general meeting of the Southern Medical Association the organization went on record as favorable to a systematic study of our future needs in that respect and the creation of a trained body of medical civilians to take charge of any situation which in the future might confront us. Joseph B'oodgood, in an address before the Railway Surgeons' Section, took the position that the problem of the railway surgeon in time of peace was practically the problem of the army surgeon in time of war, insofar as first aid was considered, that in time of peace the army surgeon had little or nothing to do to train him for future active service in that respect. Our experience in the Spanish-American War with typhoid was noted, as well as the fact that while that could never again occur, no one knew the new problems that might arise with each succeeding war; that whatever they might be, we should now prepare to cope with them and that the civilian practitioner owed that duty to his nation.

To these principles we subscribe. No one dreamed eighteen months ago that the principal concern of the European surgeons and those from America now assisting them would today be tetanus, gas bacillus gangrene, the strange symptoms produced by irritating gases, typhus—not a few score of cases, but mounting into staggering thousands, with every wound an infected one. From eye witnesses to the frightful carnage the news comes to us that this is vast'y different from anything ever before occurring, that human suffering incurred is beyond belief.

We hope we will not have to meet such conditions, but in all human probability we will sooner or later have identical conditions, possibly worse

than those now staged in Europe. Should we soon have to meet some of the greater nations, we may be severely punished before we can possibly prepare to adequately meet the problems confronting us. Heretofore death in war has not been due so much to actual wounds as to disease. The present war, however, is taking toll in every way, but it is reasonable to assume that when the facts are finally before us the ratio will not be so greatly different from past conflicts as one might think. With the exception of the Civil War, we have had no great national calamity. The Mexican and Spanish wars were too one-sided to hurt us much, but it is a fact well evidenced by reading histories of those conflicts that our army was lamentably short as to commissary supplies and medical service. Accurate reports show that death from wounds in the Spanish War were negligible compared with those due to disease. With these memories before us we certainly owe to the nation that so far has given us greater blessings than those enjoyed by any other a sensible preparation to protect its people should it unfortunately become necessary.

THE DALLAS MEETING OF THE SOUTHERN MEDICAL ASSOCIATION.

For the first time this great organization has met in the South's greatest state. The meeting was not a disappointment to those attending and gave an opportunity to many physicians to see and hear some of the pacemakers of the medical profession long admired in the South from sentimental reasons as well as for their high attainments. W. L. Rodman, President of the A. M. A., a Kentuckian by birth, who began his practice more than thirty years ago at Ft. Sill, in Indian Territory, as a young army surgeon, later assuming private practice in Texas, afterwards achieving just fame as a Philadelphia surgeon, was the guest of honor of the meeting. Isadore Dyer, Joseph Bloodgood, J. Shelton Horsley, Oscar Dowling, A. T. McCormack, Rupert Blue, Hugh Young and many others added luster to the meeting.

The entertainment features and clinics offered by the Dallas profession were exceptionally good. The only complaint of any sort registered was due to poor acoustics of some of the meeting places.

Robert Wilson, Jr., Charleston, was elected president; Holman Taylor, Ft. Worth, Guy Hunner, Baltimore, vice-presidents; Seale Harris, Mobile, re-elected secretary. The Southern States Railway Association, auxiliary to the organization, elected Southgate Leigh, Norfolk, president; R. W. Knox, Houston, vice-president; Ambrose McKey, Jackson, Tenn., secretary.

PERSONAL AND GENERAL NEWS

Dr. P. M. Richardson has moved from Millerton to Coleman.

Dr. K. L. Colley, Pawhuska, visited in Virginia in November.

Dr. J. S. Hibbard, Cherokee, is in New York doing special work.

Dr. J. T. McLean, formerly of Bartlesville, has moved to El Reno, Texas.

Dr. and Mrs. Ralph Workman, Woodward, are visiting the Pacific Coast.

Dr. J. W. Gray, Quinton, has been doing special work in Chicago and St. Louis.

Dr. W. E. Dicken, Oklahoma City, attended the Boston meeting of Clinical Surgeons.

Dr. R. F. Terrell, Stigler, who has been dangerous ill for some time, is able to be out again.

Dr. S. H. Welch, Dacoma, has returned from New York, where he has been doing post-graduate work.

Dr. Walter Capshaw, Norman, has returned from a prolonged Eastern trip.

Dr. C. M. Chambers, McCurtain, was recently operated on in Ft. Smith for appendicitis.

Dr. J. S. Hartford, Oklahoma City, attended the Boston meeting of the Congress of Clinical Surgeons.

Dr. P. F. Herod, formerly of Alva, has located in El Reno. He will specialize in eye, ear, nose and throat work.

Dr. C. M. Compton of Coyle was found dead in his bed Monday, November 8th. The cause of death is supposed to be heart failure.

Dr. W. W. Brown of Cameron died in that place November 2 from pneumonia, after an illness of three weeks. He leaves a widow and several children.

Dr. C. E. Hamner, formerly of Norman Public Health Laboratories, has returned from New Orleans and is associated with Dr. Walter E. Wright in the Tulsa Laboratory.

Muskogee County Society met November — with the following program: "Interstital Keratitis," M. K. Thompson and I. B. Oldham; paper, H. T. Ballantine, Muskogee.

Dr. H. H. Gipson, Oklahoma City, has brought suit against the Frisco Railway Company and David B. McCallum, an engineer, for personal injuries received August 8, when his automobile was struck by an engine.

Dr. R. L. Morrison, Poteau, died in that place November 15, after an illness of six months. Dr. Morrison is the son of a physician, has resided in Poteau for twelve years and ranked high in the profession or LeFlore County and Eastern Oklahoma. The sympathies of The Journal go to his family and friends.

Dr. J. H. Scott, County Health Officer of Pottawatomie County, warns the public that the mild epidemic of scarlet fever prevalent in that county is just as contagious as that of the virulent form; that it is the right of neighbors to have such cases quarantined and that a physician should be called at once.

Haskell County Medical Society held a regular meeting November 18 with the following announced program: Subject unannounced, Floyd E. Watterfield, Muskogee; "How I Collect," E. Johnson, Kinta; "The Duties of the County Superintendent of Health and the Doctors to Each Other," A. B. Callaway, Stigler; "Substitutes for Opium," R. R. Callaway, Stigler.

CORRESPONDENCE AND MISCELLANEOUS

Mangum, Okla., Oct. 28, 1915.

Dr. Claude Thompson, Muskogee, Okla.

Dear Doctor: In the October issue of the Journal you stated that Dr. Fowler Border was out with a red-hot communication castigating the county officials of Greer County, and especially the county attorney, for dismissing the charges against the officials of the Light Company.

Your readers would misunderstand the situation, as the facts are that I was only after the county attorney, never having had the least controversy with any other county or city official during my fifteen years residence here.

The county attorney has given my communication favorable consideration and has had John C. Keys, President of the Light Company, and Julian R. Bond (husband of the woman in the Senator Gore case) re-arrested and placed under bond for their appearance at the next term of court. Dr. Jessie F. Campbell, the third defendant, disappeared between two days and escaped arrest. Five co-defendants in the same conspiracy were convicted over a year ago.

The object of that conspiracy was to kill me politically and otherwise as Mayor of Mangum, in order to stop a bond election for the voting of a hundred thousand dollar municipal light plant. Tables were turned on them and the bond carried about three to one. I would like for you to correct this statement, because I do not like the impression to get out that I am after the whole bunch of county officials.

Your friend,

G. F. BORDER, Mayor.

ANONYMOUS.

The writer of the anonymous communication from El Reno may have an answer to his communication if he will send his name. Ordinarily anonymous communications are ignored, but the Journal stands for the principles he seemingly wishes to convey and there is no occasion for him not signing his communication.—Ed.

FROM THE OKLAHOMA STATE BOARD OF HEALTH, GUTHRIE.

Dr. John W. Duke, State Commissioner of Health.

Control of Diphtheria.

In every Oklahoma town where diphtheria appears, the safest course would be to close the public schools, followed by a rigid quarantine of all places where persons have been exposed to infection. Parents should know that "membranous croup" is a myth. If diphtheria is suspected, the best available physician should be called, and antitoxin administered without delay, even though the symptoms be confusing. This should also be done in so-called spasmodic croup if the attack fails to subside in three or four hours. In developed cases of diphtheria, the serum dose for an adult is from 10,000 to 15,000 units. Any information concerning treatment of diphtheria, including preventive measures, will be promptly furnished reputable physicians by the State Board of Health at Guthrie.

New Germ-Killer Discovered.

The United States government, in its department of public health service, has discovered a new disinfectant that undoubtedly will soon be in use throughout the country, because of its superiority over all ordinary disinfectants. Germs cause disease, and the right kind of disinfectant properly applied will kill germs. This new disinfectant may be prepared in any home, and solely from materials produced in the United States. It can be manufactured for less than fifty cents a gallon. It is composed of pine oil, a by-product in the manufacture of turpentine, rosin, and sodium hydroxid, in the proportions of 5½ pounds of pine oil, 2.2 pounds of rosin, and 1.1 pounds of 25 per cent solution of sodium hydroxid. Its phenol coefficient is between 4 and 6, which means that it has more than four times the disinfectant properties of carbolic acid. It retains its strength for about two months. The finished product is a reddish-brown liquid, rather thick and oily in appearance, but free from turbidity. With water it makes a harmless emulsion, much resembling milk. It has a pleasing odor, no objectionable taste, and attacks neither fabrics or metals. It is altogether non-poisonous and may be safely used as a throat spray or mouth wash in solutions of ordinary strength. Only pine oil derived from what is known as the steam or solvent process should be used. Preferably it should be compounded by a qualified druggist. This discovery is another contribution of science to the preservation of human health. It is to be known as "hygienic laboratory pine-oil disinfectant."

Control of Scarlet Fever.

For the next several months, scarlet fever, supposed to be a germ disease, will do its level best to invade the homes and schools of Oklahoma. Its dangers, unhappily, are only too well known. The coming together of children in poorly ventilated and overheated rooms affords excellent opportunity for the spread of this disease. The germ, to which has been given the name *Bacillus Scarlatinae*, is said to survive for twenty years, which vastly increases the menace of this tiger which annually destroys its victims by thousands. The infection is easily and quickly transmitted at any stage of the disease, but is probably most active just before the visible symptoms appear.

Secretions from the nose and mouth, and excretions from the bowels, kidneys and skin are carriers of the disease, and all objects exposed to such contamination should be burned or thoroughly disinfected. It is best to destroy all books and toys used by a patient. All useless furnishings should be removed from the room to be occupied by a scarlet fever patient. Upon the latter's recovery, the paper should be scraped from the walls, and the latter, together with the floors and woodwork, should be carefully scrubbed with a sublimate solution having a strength of 1 to 1,000. Then expose the room, tightly closed, to formaldehyde gas for twelve hours. Then let in fresh air and sunlight for a week before the room is re-occupied.

The physician and the nurse should exercise the greatest precaution in the removal of their outer garments upon entering or leaving the sick room, in obedience to sanitary rules with which all competent physicians are acquainted. Preferably the nurse should take her meals in the sick room. All utensils used by the patient in eating should afterwards be soaked for an hour in a five percent solution of carbolic acid, and then boiled. All bedding and clothing should be sterilized in the same manner.

The appearance of scarlet fever in a household should be followed by a rigid quarantine of all persons who have been exposed, otherwise the disease may carry suffering and death throughout a neighborhood.

Upon recovery give the patient a thorough bath in a bichloride solution having a strength of 1 to 12,000 or 15,000. Wash the hair carefully with an antiseptic solution, and irrigate the mouth, nose and throat well in a similar solution. Then remove the patient to another room and dress in fresh clothing.

From four to six weeks is probably a safe duration of quarantine. But take no chances, and be on the safe side. If there is a discharge from the nose, mouth or ears, continue the period of quarantine under the direction of a competent physician. The germ is extremely tenacious of life, and these discharges are ideal carriers of the disease.

Quarantine all members of a school class in which scarlet fever has appeared. If the disease should become epidemic, close the school. It should not be forgotten, however, that this may turn loose scores of children who already have been exposed and infected. Let the situation be handled by the community's best physicians, to whom the public should be obedient in every particular.

ONE OF THE FIRST AMERICAN WOMEN to submit to Twilight Sleep at the Freiburg Clinic and who afterwards became noted for her strenuous advocacy of its adoption recently died in the Long Island College Hospital from hemorrhage following childbirth. The attending obstetrician was known as one of the strongest advocates in the country of Twilight Sleep. Considerable publicity was given to the woman's death in the lay press. The mutual faith of the patient and physician in the efficacy of this method of treatment aroused the suspicion that the expectant mother died a martyr to her faith, but nothing was published confirmatory to this belief.

We are in a position to relate the following facts:

The patient had advanced to the eighth month of pregnancy. A partial placenta previa resulted in several severe hemorrhages. It was decided to induce premature labor and she was removed to the hospital. The vertex presented and the child and placenta were delivered without difficulty. A most violent and uncontrollable hemorrhage followed and in spite of the skill of the attendant and his assistants the woman died upon the table.

The case opens up a field for speculation as to the effects of the drugs employed—scopolamine and morphine—upon the tonicity of the muscular structure of the uterus following delivery. It is a debatable question whether or not the partial narcotism could or would produce a relaxed condition of the musculature conducive to hemorrhage.—N. Y. State Journal of Medicine.

COMPENSATION ACTS INCREASE MALPRACTICE SUITS, is an observation of Dr. C. B. King, Chicago, who acted as chairman of the committee of medical defense survey for the Illinois State Medical Society.

"My supposition from studying the reports of 23 of the different state societies from whom the committee appointed to make investigation of medical defense shows that in the states that have a compensation act the suits for malpractice are increasing by bonds. In the states where no compensation act is in force we have fewer cases. For instance in Pennsylvania, with the great cities of Philadelphia, Pittsburgh, Harrisburg and Scranton, where there are thousands of employes, it costs the doctor 50 cents per capita to take care of medical defense. In the state of Washington, a very much smaller state, with a compensation act that has completely put lawyers out of the running, it costs the doctor \$10.00 per year per capita to carry the defense, and the casualty companies have quit the state entirely or practically so. In the State of Washington the compensation act really means state insurance. They have in that state a commission: One appointed by the labor interests; one appointed by the employing interests and one by the governor of the state. These three men make up a state committee to settle every case. The employers of labor pay to the secretary of state a percentage depending upon their payroll. Whenever an accident happens or an employe is injured in any way the report is immediately made to the secretary of state, and this commission of three men settle the matter after the reports of the various physicians come in. No lawyer has a chance to get in but the poor doctor—God pity him in that state!"

The medico-legal committee of the same society reported at the last annual meeting:

"The committee notes the following facts: Malpractice suits are on a rapid increase and not only in Illinois but in all states."

These warnings from Illinois tend to justify the action of our house of delegates at the Cincinnati meeting in offering an amendment making it possible for our association to provide medical defense.—Ohio State Medical Journal.

FUMIGATION VS. CLEANLINESS.

The action of the Board of Health of the city of New York in discontinuing the practice of fumigating in infectious diseases will be watched by those who still believe in the antiseptic value of certain stifling gases with a great deal of interest. Convinced that fumigation was of no value but willing to have a comparative test made on a large scale, Dr. Goldwater, in December, 1914, discontinued fumigation in infected houses in Manhattan, the Bronx, Queens and Richmond, but continued it in the borough of Brooklyn. The substitute for formaldehyde, sulphurous acid, etc., was the always accessible cleaning, fresh air, sunlight, and particularly the renovation of premises by repainting and repapering. Prior to the discontinuance of the orthodox fumigation renovation by paint and paper was only enforced in cases of tuberculosis. The new method has apparently already justified itself. There has been no increase in the prevalence of the infectious diseases, more efficient disinfection has been performed and the annual saving to the city is estimated at \$30,000. The new methods are forced upon the owner of the premises by a refusal of the department to remove the infectious disease placard until the necessary cleaning has been satisfactorily done. The most interesting part of the report deals with the comparative results in Manhattan and Brooklyn. It says:

"In the borough of Manhattan, 193 cases occurred among 3,451 primary cases of diphtheria. Of these, 171, or 4.9 per cent., would not have been affected by fumigation, and 22, or 0.6 per cent., might have been so affected.

"In Brooklyn, where fumigation was performed, there were 138 later cases among 2,907 original cases. Of these, 110, or 3.8 per cent., would not have been affected by fumigation, and 28, or 0.9 per cent., might have been so affected. In other words, there were half again as many later cases in Brooklyn, where fumigation was done, as in Manhattan, where it was not done.

"In the case of scarlet fever, the number of possibly preventable later cases was practically the same in the two boroughs, viz., 1.0 per cent. and .99 per cent., respectively. In Manhattan, 263 later cases occurred among 3,331 original cases. Of these, 229, or 6.8 per cent., would not have been affected by fumigation; 34, or 1.0 per cent., might have been so affected. In Brooklyn, 156 later cases occurred among 2,206 original cases. Of these, 134, or 6.0 per cent., would not have been affected by fumigation, and 22, or .99 per cent., might have been so affected.

"These figures show that the discontinuance of fumigation in diphtheria and scarlet fever in the boroughs of Manhattan, the Bronx and Richmond has not been followed by any harmful effects.

"In view of the time of testing, the Health Department officially holds to the opinion that the value of routine fumigation as a means of disinfection of premises where cases of infectious diseases have occurred is ineffective in that it does not destroy the disease germs."—Lancet-Clinic.



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Successful Infant Feeding

What to do in Diarrhoea

A majority of cases of diarrhoea occurring in babies under six months of age are due to sugar fermentation. Over six months it may be either putrefactive or fermentative.

The treatment of fermentative diarrhoea is, stop all sugars and give $\frac{1}{2}$ milk $\frac{1}{2}$ water and boil the feeding. As the stools show improvement add $\frac{1}{2}$ oz. Dextri-Maltose to the total 24 hour feeding, then gradually increase the milk and proper feeding for his age and weight.

The treatment of putrefactive diarrhoea is, stop all milk feeding and give barley water for 12 to 24 hours, then give $\frac{1}{2}$ milk $\frac{1}{2}$ water, 1 oz. of Dextri-Maltose, gradually increasing the milk and Dextri-Maltose until he is getting the proper feeding for his age and weight.

Mead's Dextri-Maltose is 100 per cent less likely to produce diarrhoea than milk sugar or cane sugar.

What to do in Constipation

Constipation in the bottle fed baby is usually caused by errors in his diet. The most common are: too high fat content; causing hard, granular stools; food of insufficient quantity or strength, causing scanty stools; not enough sugar; also boiling the milk. Having decided as to the possible cause of the constipation, the thing to do is change the food so as

8

to overcome the cause; for example, fat constipation is corrected by giving a skimmed milk feeding; deficient sugar constipation, by adding $\frac{1}{2}$ ounce of cane sugar to the regular formula. In some of the cases of persistent constipation it is often necessary to add milk of magnesia to the feeding, using one teaspoonful to the morning and evening feeding.

What to do in Vomiting

Vomiting may be due to many causes. The principal causes being: too frequent feedings; large hole in the nipples, allowing the food to be taken too rapidly; not keeping the baby quiet after nursing; tight belly bands.

The treatment of acute vomiting is, immediately stop all food. In severe cases even water should not be given. Calomel is at once given, 1 grain every $\frac{1}{2}$ hour until 1 to 2 grains are given. The effect of castor oil is not as good in cases of vomiting as that of calomel because it is less apt to be retained, and thus its effect is spoiled.

One level teaspoonful of bicarb. of soda dissolved in a glassful of water, and a teaspoonful or two given at short intervals, often proves helpful in vomiting. Food should not be given until the vomiting has ceased entirely for a number of hours, and it is shown that water is retained.

A feeding of $\frac{1}{2}$ milk and $\frac{1}{2}$ water, no

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MISS ROSE GROSS, R. N., Operating Room Nurse

Successful Infant Feeding

What to do in Diarrhoea
A majority of cases of diarrhoea occurring in babies under six months of age are due to sugar fermentation. Over six months it may be either putrefactive or fermentative.

The treatment of fermentative diarrhoea is, stop all sugars and give $\frac{1}{2}$ milk $\frac{1}{2}$ water and boil the feeding. As the stools show improvement add $\frac{1}{2}$ oz. Dextri-Maltose to the total 24 hour feeding, then gradually increase the milk and Dextri-Maltose until baby is getting the proper feeding for his age and weight.

The treatment of putrefactive diarrhoea is, stop all milk feeding and give barley water for 12 to 24 hours, then give $\frac{1}{2}$ milk, $\frac{1}{2}$ water, 1 oz. of Dextri-Maltose, gradually increasing the milk and Dextri-Maltose until he is getting the proper feeding for his age and weight.

Mead's Dextri-Maltose is 100 per cent less likely to produce diarrhoea than milk sugar or cane sugar.

What to do in Constipation
Constipation in the bottle fed baby is usually caused by errors in his diet. The most common are: too high fat content, causing hard, granular stools; food of insufficient quantity or strength, causing scanty stools; not enough sugar; also boiling the milk. Having decided as to the possible cause of the constipation, the thing to do is change the food so as

to overcome the cause; for example, fat constipation is corrected by giving a skimmed milk feeding; deficient sugar constipation, by adding $\frac{1}{2}$ ounce of cane sugar to the regular formula. In some of the cases of persistent constipation it is often necessary to add milk of magnesia to the feeding, using one teaspoonful to the morning and evening feeding.

What to do in Vomiting
Vomiting may be due to many causes, the principal causes being: too frequent feedings; large hole in the nipples, allowing the food to be taken too rapidly; not keeping the baby quiet after nursing; tight belly bands.

The treatment of acute vomiting is, immediately stop all food. In severe cases even water should not be given. Calomel is at once given, $\frac{1}{2}$ grain every $\frac{1}{2}$ hour until 1 to 2 grains are given. The effect of castor oil is not as good in cases of vomiting as that of calomel because it is less apt to be retained, and thus its effect is spoiled.

One level teaspoonful of bicarb. of soda dissolved in a glassful of water, and a teaspoonful or two given at short intervals, often proves helpful in vomiting. Food should not be given until the vomiting has ceased entirely for a number of hours, and it is shown that water is retained.

A feeding of $\frac{1}{2}$ milk and $\frac{1}{2}$ water, no retained.

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